Appendix A Glossary and Index

ACRONYMS
AADT – Average Annual Daily Traffic
ASTs – Aboveground Storage Tanks
ACBM – Asbestos Containing Building Materials
ACC/MVM - Accidents per million vehicle miles
ACHP – Advisory Council on Historic Preservation
ACOE - United States Army Corps of Engineers
ADT - Average Daily Traffic
ARG – Agricultural Supply
BMP – Best Management Practice
CAAA – Federal Clean Air Act Amendments of 1990
CDFG – California Department of Fish and Game
CEQA – California Environmental Quality Act of 1970
CNDDB - California Natural Diversity Data Base
CNEL – Community Noise Equivalent Level
CNPS – California Native Plant Society
COD – Chemical Oxygen Demand
CTC – California Transportation Commission
CWA – Clean Water Act
dBA – Noise measurement
DRIR – Draft Relocation Impact Report
ESA – Environmentally Sensitive Area
FEMA - Federal Emergency Management Agency
FHWA - Federal Highway Administration
FIRM - Flood Insurance Rate Map
Ha – Hectare
HASR - Historic Architectural Survey Report
HOV - High Occupancy Vehicle
HPSR - Historic Property Survey Report
ISA – Initial Site Assessment
kph – Kilometers per hour
L_{dn} – Sound level, day and night
LEDPA – Least Environmentally Damaging Practicable Alternative.
$L_{eq}(h)$ – Sound level equivalent
LOS – Level of Service
m – meters
NEPA - National Environmental Policy Act, 1969
NMFS - National Marine Fisheries Service
NOD - Notice of Determination
NOI - Notice of Intent
NOP - Notice of Preparation
NRHP – National Register of Historic Places
NPDES - National Pollutant Discharge Elimination System
ROD - Record of Decision
RTP - Regional Transportation Plan

RWQCB - Regional Water Quality Control Board
SMARA – Surface Mining and Reclamation Act
SHPO - State Historic Preservation Officer
STIP - State Transportation Improvement Program
SWPPP - Storm Water Pollution Prevention Plan
TASAS - Traffic Accident Surveillance and Analysis System
TEA-21 - Transportation Equity Act for the 21st Century
TIP - Transportation Improvement Program
TSM - Transportation Systems Management
USEPA - United States Environmental Protection Agency
USFWS - United States Fish and Wildlife Service
USGS – United States Geological Survey
vph – vehicles per hour

DEFINITIONS
404 Permit – The Corps of Engineers requires this permit for all projects that involve dredging or filling of lakes, streams, tidelands, marshes, or low-lying areas behind dikes or levees, as well as for disposal of dredged materials to any waterway or ocean.
Aboveground Storage Tanks (ASTs) – These tanks typically contain motor vehicle fuel.
Agricultural Supply (ARG) – Includes crop, orchard, and pasture irrigation, stock watering support of vegetation for range grazing, and all uses in support of farming and ranching operations.
Anadromous – Migrating up rivers from the sea to breed in fresh water.
Asbestos Containing Building Materials (ACBM) – These are typically common building materials such as ceiling or floors tiles, mastics, wallboards or insulation manufactured prior to the 1970s.
Base Floodplain Elevation – The elevation shown on the Flood Insurance Rate Map for Zones AE, AH, A1-A30, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO, V1-V30, and VE that indicates the water surface elevation resulting from a flood that has a one percent chance of equaling or exceeding that level in any given year.
Base Floodplain Development – To encourage, allow, serve, or otherwise facilitate additional development within the base floodplain, either directly or indirectly.
Basin Plan – A specific plan for control of water quality within one of the nine hydrologic basins of the State under the regulation of a Water Quality Control Board.
Beneficial Impact – A beneficial impact is one that would result in a positive contribution or improvement in environmental conditions. These types of impacts do not require mitigation measures.
Beneficial Use – A use of a natural water resource that enhances the social, economic, and environmental well-being of the user. Twenty-one beneficial uses are defined for the waters of California.

Best Management Practice (BMP) – Any program, technology, process, siting criteria, operating method, measure, or device that controls, prevents, removes, or reduces pollution.
Bypass – An arterial highway that permits traffic to avoid all or part of a certain area such as an urban area or park.
California Native Plant Society (CNPS) – The CNPS produces an inventory of rare and endangered plants and vascular plants of California. The inventory includes five lists, which categorize the degree of concern for the plant, List 1A, 1B, 2, 3, and 4. Plants in List 1A, 1B and 2 are protected under Section 1901, Chapter 10 (Native Plant Protection Act) and Sections 2062 and 2067 of the California Endangered Species Act and are eligible for State listing. It is mandatory that they be fully considered during preparation of environmental documents relating to CEQA.
Caltrans – California Department of Transportation. Responsible, as owner/operator of the state highway system, for its safe operation and maintenance.
Chemical Oxygen Demand (COD) – A monitoring test that measures all the oxidizable matter found in a runoff sample, a portion of which could deplete dissolved oxygen in receiving waters.
Community Noise Equivalent Level (CNEL) – A noise level that takes into account all the noise energy measured in dBA from a source during 24 hours and adds 5 dBA to evening noise, and adds 10 dBA to night noise during the period.
Conventional Highway – A highway with no control of access (no control of access roads onto the highway) which may or may not be divided or have grade separations at intersections.
Cooperating Agency – Any federal agency other than the lead agency, which has jurisdiction by law or other expertise with respect to the environmental impacts expected to result from a proposed project. 40 CFR 150.5
Corridor – A strip of land between two termini within which traffic, topography, environment, and other characteristics are evaluated for transportation purposes.
Cumulative Effects – Effects that are the result of incremental impacts of an action, when added to other past, present, and reasonably foreseeable future actions, regardless of which agency (federal or nonfederal) or person undertakes such action. 40 CFR 1508.7.
Design Speed – A speed selected to establish specific minimum geometric design elements for a particular section of highway
Detention Basin – A basin, usually surrounded by a dike or levee, which holds stormwater runoff until the receiving waters are low enough for the contained water to be discharged.
Discharge – Instantaneous rate of flow expressed in terms of volume per unit time.
Draft EIR/EIS – Draft Environmental Impact Report (state), Environmental Impact Statement (federal)
Drainage Basin – The area in which all surface water will accumulate into one given stream.
Ecosystem – The total dynamic complex of a community of organisms and its controlling environment functioning as a unit.
Elevation(s) – All elevations are based on the National Geodetic Vertical Datum of 1929 (NGVD-29).

Encroachment, Floodplain – A floodplain encroachment is an action within the limits of the base floodplain. Any construction activity within a base floodplain constitutes an encroachment.
Endangered – Plant or animal species that are in danger of extinction throughout all or a significant portion of its range.
Environmentally Sensitive Area – Defines area to be avoided by project construction activities and by future facility maintenance activities.
Erosion – The wearing away of the land surface by running water, wind, ice, or other geological agents.
Expressway – An arterial highway with at least partial control of access, where limits are placed on number and types of intersecting streets, roads and driveways. An expressway may or may not be divided or have separations at intersections.
Feasibility (of noise abatement) – A minimum of 5 dBA noise reduction must be achieved at the impacted receivers in order for the proposed noise abatement measure to be considered *feasible*. The feasibility criterion is not necessarily a noise abatement design goal; greater noise reductions are encouraged if they can be achieved reasonably. Feasibility may be restricted by (1) topography; (2) access requirements for driveways, ramps, etc.; (3) the presence of local cross streets; (4) other noise sources in the area; and, (5) safety considerations.
Federal Register – A federal publication which provides official notice of federal administrative hearings and issuance of proposed and final federal administrative rules and regulations.
Fishery – A stream capable of supporting angling activities. Usually streams which show evidence of spawning and nursery grounds.
Flood Insurance Rate Map (FIRM) – The official map of the community on which FEMA has delineated both the special flood hazard areas and the risk premium zones applicable to the community.
Floodplain – Normally dry land areas subject to periodic temporary inundation by stream flow or tidal overflow. Land formed by deposition of sediment by water; alluvial land.
Floodway – The channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that a 100-year flood event can be carried without substantial increase in flood elevations. FEMA's minimum standards limit such increases in flood heights to 0.30 m (1.0 ft), provided hazardous velocities are not produced.
Freeway – A divided arterial highway with full control of access and with grade separations at intersecting roadways.
Fresh Water Replenishment (FRSH) – Provides a source of fresh water for replenishment of inland lakes and streams of varying salinity.
Grade Separation – Utilized when two roads intersect at different grades (vertical planes). Normally provided as part of an interchange; in lieu of an at-grade intersection.
Groundwater Recharge (GWR) - Includes natural or artificial recharge for future extraction for beneficial uses and to maintain salt balance or halt saltwater intrusion into freshwater aquifers.
Habitat - The place or type of site where a plant or animal naturally or normally lives

and grows.
Heavy Metals – These are metals such as lead and copper that are typically found as contaminants resulting from motor vehicle fluid (such as used motor oil) discharge.
Hectare (Ha) – A measure of area in the metric system similar to an acre. One hectare is equal to 10,000 square meters and 2.4711 acres.
High Occupancy Vehicle (HOV) – Refers to carpooling.
Hummocky – A rounded or conical knoll, mound, or hillock or other small elevation; a slight rise of ground above a level surface.
Hydric Soil – Inundated or saturated soil conditions resulting from permanent or periodic inundation by groundwater or surface water.
Initial Site Assessment (ISA) – This is a Caltrans term for a study that determines hazardous waste issues on a project.
Intermittent Stream – A stream, which flows only during part of the year, usually during wet weather.
L_{dn} – "Sound level, day and night" averages total acoustical energy over a 24-hour period. In addition, a 10 dBA "penalty" is added to L_{dn}, to take into consideration nighttime sleeping hours and this is factored into the 24-hour average.
Lead Agency – The agency or agencies preparing or having taken primary responsibility for preparing the environmental impact statement/report. 40 CFR 1508.16
Least Environmentally Damaging Practicable Alternative (LEDPA) – The Section 404(b)(1) Alternative Analysis is a specific evaluation to determine the LEDPA to waters of the U.S., including wetland, while meeting the project's purpose. A Section 404 Permit can only be issued for the LEDPA.
Less-than-Significant Impact - Under CEQA, a less-than-significant impact is one that would not result in a substantial detrimental change in the environment. This impact if below the threshold of significance, and therefore, does not require mitigation (see Threshold).
$L_{eq}(h)$ – "Sound level equivalent" averages the total acoustical energy over one hour. For example, the 50 dBA of a quiet residential area next to an airport and the 105 dBA of an aircraft taking off would be averaged over a one-hour period, so that the L_{eq} measurement would lie somewhere between 50 dBA and 105 dBA.
Level of Service (LOS) - a measurement of the capacity of the roadway.
Median - The portion of a divided highway separating the traveled ways for traffic in opposite directions.
Metric System – A decimal system of weights and measures in which the gram, the meter, and the liter are the basic units of weight, length, and volume, respectively. Names for the most common other units are formed by the addition of the following prefixes to these three terms: deca-, hecto-, kilo- (ten, hundred, thousand) and deci-, centi-, milli-, (tenth, hundredth, thousandth). This system is an internationally accepted system of weights and measures. Starting in 1994, Caltrans began the several year process of converting to the use of SI (the International System of Units) as metric is sometimes called.

Mitigation Measures - A change in a project designed to avoid, minimize, rectify, reduce, or compensate for an environmental impact. 40 CFR 1508.20. If impacts cannot be avoided, the next steps are to minimize, eliminate, or compensate for these effects. These actions, steps, procedures, or conditions (mitigation measures) may involve rectifying an impact by repairing, rehabilitating, or restoring the affected environment.
Municipal and Domestic Supply – Includes usual uses in community or military water systems and domestic uses from individual water supply systems.
National Pollutant Discharge Elimination System (NPDES) Construction Permit - A permit regulated by the Regional Water Quality Control Board required if more than 2 ha (5 ac) of original ground is graded. One condition of this permit is that the contractor submit a Storm Water Pollution Prevention Plan (SWPPP), which is similar to the Water Pollution Control Plan required by Caltrans Standard Specification 7-1.01G.
NEPA/404 Integration Process – The NEPA – Section 404 integration process is a Memorandum of Understanding (MOU) committed to integrating NEPA and section 404 of the Clean Water Act in the transportation planning, programming, and implementation stages. It is committed to ensuring the earliest possible consideration of environmental concerns pertaining to waters of the U.S., including wetlands, at each of these three stages. A high priority is placed on the avoidance of impacts to waters of the U.S. and associated sensitive species, including threatened and endangered species. Whenever avoidance of waters of the U.S. is not practicable, minimization of impacts will be achieved, and unavoidable impacts will be mitigated to the extent reasonable and practicable
Nodal Analysis – Nodal approach allows a segment of one alternative to be combined with a segment of another alternative so a new or "hybrid alternative" is created.
Nonpoint Source - A dispersed source of pollution that is not identifiable as to a specific location.
Notice of Determination (NOD) -- Part of the CEQA process. It indicates that a project has been approved subject to the requirements of CEQA. CEQA Guidelines Sec. 15094.
Notice of Intent (NOI) -- Part of the NEPA process. A notice placed in the Federal Register to advise the public that an environmental impact statement will be prepared for a project. 40 CFR 1508.22.
Notice of Preparation (NOP) -- Part of the CEQA process. Notice of intent to prepare an environmental impact report on a project. CEQA Guidelines Sec. 15082(a).
Perennial Stream - A stream with continuous year-round flow.
pH – A measure of acidity or alkalinity.
PM_{10} - Particulate matter less than 10 microns in diameter, small enough to enter human lungs during respiration.
Point Source - A source of pollution that is emitted at a singular location.
Polychlorinated biphenyls (PCBs) – Fire-resistant organic fluids used in making plastics and as insulation in heavy-duty electrical equipment.
Postmile (PM) - A method of identifying a location on the State Highway System using miles. When combined with the county and route, identifies unique locations along any State Route in terms of miles.

Potentially Significant Impact - Under CEQA, a potentially significant impact is one that, if it were to occur, would be considered a significant impact; however, the occurrence of the impact cannot be immediately determined. A potentially significant impact is treated (i.e., mitigated) as if it were a significant impact. (Refer to definitions for Significant Impact and Threshold of Significance, below.)
Practicable – Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.
Project Report - Report providing preprogramming project information. The PSR describes the project, its scope and limits, costs and delivery schedule.
PS&E - Plans, Specifications and Estimates are construction documents.
Reasonableness (of noise abatement) -- The determination of *reasonableness* of noise abatement is more subjective than the determination of its feasibility. It implies that common sense and good judgment have been applied in arriving at a decision. Noise abatement is only considered where noise impacts are predicted and where frequent human use occurs and a lowered noise level would be of benefit. Primary consideration is given to exterior areas. The overall reasonableness of noise abatement is determined by considering a multitude of factors.
Record of Decision (ROD) – A public document that reflects the agency's final decision, rationale behind that decision, and commitments to monitoring and mitigation. 40 CFR 1505.2
Regulatory agency - An agency which has jurisdiction by law.
Relinquishment – Section 73 of the Streets and Highways (S&H) Code requires that the "highway" must be placed in a "state of good repair" prior to relinquishment of routes superseded by relocation. Section 73 also specifies that Caltrans is not obligated for widening new construction, or for major reconstruction, unless specifically directed by the CTC.
Responsible Agency – Under CEQA, the term "responsible agency" includes all public agencies, other than the lead agency, which have discretionary approval power over the project. CEQA Guidelines, Sec. 15381.
Retention Basin - A basin that holds stormwater runoff without release except by means of evaporation, infiltration or emergency bypass.
Right-of-way (ROW) - A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.
Riparian - Pertaining to the banks and other adjacent terrestrial (as opposed to aquatic) environs of freshwater bodies, watercourses, estuaries, and surface-emergent aquifers (springs, seeps, oases) whose transported freshwater provides soil moisture sufficient in excess of that otherwise available through local precipitation to potentially support the growth of mesic vegetation.
Route Concept - Most likely facility on the route given present and future financial, planning and engineering factors.
Runoff - The storm water which is not absorbed into the ground.
Scoping - An activity of the lead agency in the environmental review process that ensures the inclusion of: (1) all significant issues; and (2) maximum participation for the development of the EIS/EIR.

Sensitive Species - Plant or animal species which are (1) Federal listed or proposed threatened or endangered species, or candidate species; (2) bird species protected under the Migratory Bird Treaty Act; (3) species protected under State endangered species laws and regulations, plant protection laws and regulations, Fish and Game codes, or species of special concern listings and policies, or (4) species recognized by national, state, or local environmental organizations (e.g., the California Native Plant Society).
Significant Impact –A significant impact is one that will result in a detrimental change in any of the physical or socioeconomic conditions affected by the project. Under CEQA, an impact is significant if it exceeds the threshold criteria for a particular resource (see Threshold) (CEQA Guidelines Sec. 15358). Under NEPA, the significance of an impact is determined by considering the context in which it will occur and the severity of the impact (40 CFR 1508.2).
Soffit – The low point on the underside of a bridge span or the uppermost point on the inside of a drainage structure (culvert).
Statewide Gateway - Major points of entry into California, including interstate routes, international routes, seaports, international airports, and intermodal transportation facilities.
Suspended Solids - The filterable fraction of the total solid present in water.
TEA-21 - The Transportation Equity Act for the 21st Century was enacted June 9, 1998 as public Law 105-178. TEA-21 authorizes Federal surface transportation programs for highways, highway safety, and transit for the 6-year period 1998-2003.
Threatened - Although not presently threatened with extinction, it is likely to become an endangered species in the foreseeable future in the absence of special protection.
Threshold of Significance – Under CEQA, a threshold is a criterion used to define the level at which an impact would be considered to be significant. Exceedance or non-compliance with a threshold is normally considered to be a significant impact. Compliance would normally be considered a less than significant impact. Thresholds usually are based on standards found in existing laws or regulations (for example noise control ordinances); however, in some instances they are based on scientific opinion and/or factual data. CEQA Guidelines Section 15064.7
Topology – The history of a region as indicated by its topography.
Total Dissolved Solids - The non-filterable fraction of the total solid present in water.
Transhumance – Seasonal movement of people from one ecological zone to another, organized around the migration of game and the seasonality of edible plants; the seasonal movement of livestock between upland and lowland pastures.
Truncated Valley Alternatives – Truncated valley alternatives are modifications of the original versions of Alternatives J1, L and C1.
Trustee Agency – A state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California. CEQA Guidelines Sec. 15386.
Turbidity – Clouded with suspended sediment, for example, in a stream, river or lake. The measure of the resistance of water to the passage of light through it (Babbitt, Donald, p. 384).
Underground Storage Tanks (USTs) – These tanks typically contain motor vehicle fuel and are placed approximately three feet below the ground surface.

Undocumented Tanks – These can be above or below ground tanks that are not properly permitted. Typically no records for ownership, use, or integrity tests can be found.
Urban - An area is considered urban if it has a population of 5,000 or more for Federal-Aid purposes.
Viaduct - A long, high bridge that carries a railway or a road over a valley or other similar area at a low level.
Volatile Organic Compounds (VOCs) – These are organic compounds that are typically found in solvents used for degreasing.
Waters of the United States - As defined by the ACOE in 33 CFR §328.3(a): 1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; 2. All interstate waters including interstate wetlands; 3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, including any such waters: (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) Which are used or could be used for industrial purposes by industries in interstate commerce; 4. All impoundment of waters otherwise defined as waters of the United States under this definition; 5. Tributaries of waters identified in paragraphs (1)-(4); 6. The territorial seas; 7. Wetlands adjacent to waters (waters that are not wetlands themselves) identified in paragraphs (1)-(6).
Watershed – The drainage basin contributing water, organic matter, dissolved nutrients, and sediments to a stream, estuary, or lake.
Wetlands – Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR §328.3 (b)).

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Appendix B Bibliography

The following documents were prepared for the proposed Willits Bypass Project:

California Department of Transportation (Caltrans)

2000 Historic Properties Survey Report for the Willits Bypass Project, Mendocino County, California. May 2000.

2001 Visual Impact Assessment for the Willits Bypass. October 20, 1999, updated March 20, 2001.

2001 Willits Bypass Farmlands Report. August 1999, updated December 2001.

2002 Willits Bypass in Mendocino County, California, Noise Report. July 2000, updated February 2002.

2001 Willits Bypass Traffic Report. November 2000, updated April 2001.

2001 Willits Bypass Air Quality Report. June 2000, updated June 18, 2001.

2001 Willits Bypass Economic Impact Report. August 2000, updated June 15, 2001.

1999 Willits Bypass Farmlands Report. December 1999.

2001 Willits Bypass Addendum Farmlands Report. June 2001.

2000 Supplemental Natural Environment Study. March 2000. Addendum attached, dated June 11, 2001.

1999 Draft Relocation Impact Report, Willits Bypass Freeway. December 1999.

2001 Addendum Draft Relocation Impact Report, Truncated Alternatives C-1, J-1, and L Alternatives. March 2001.

2000 A Focused Study of Stream Water Temperature and Canopy Cover: Implications on the Highway 101/Willits Bypass Project. February 24, 2000.

1999 Geotechnical Report for Environmental Study. May 4, 1999.

2001 Willits Bypass Energy Report. Revised June 2001.

2000 Willits Bypass Community Impact Assessment. December 8, 2000

2001 Willits Bypass Community Impact Assessment Addendum. April 6, 2001.

2001 Revised Floodplain Hydraulic Study. April 5, 2000, revised June 19, 2001.

2001 Willits Floodplain Evaluation Report. June 2001.

Camp Dresser & McKee, Inc.

2000 Water Quality Assessment for Proposed Willits Bypass Project prepared for Caltrans District 1. February 2, 2000.

Geocon Geotechnical & Environmental Consultants

2000 Initial Site Assessment, Willits Bypass Project, Mendocino County, California prepared for California Department of Transportation District 1. September 2000.

Jones & Stokes Associates, Inc.

1997 Natural Environment Study for the Highway 101/Willits Bypass Project Area prepared for California Department of Transportation District 1. December 1997.

University of California at Davis

1995 Willits Bypass Floodplain Study prepared by the Center for Environmental and Water Resources Engineering, Department of Civil and Environmental Engineering for California Department of Transportation District 1. June 1995.

Appendix C Biological Resources Mitigation Measures

All mitigation measures listed in Section 5.7 Biological Resources are repeated here with a matrix showing the mitigation measures required for each impacted biological resource by alternative. The matrix is included on every other page for ease of use.

Appendix C. Summary of Biological Resources Mitigation Measures

BIO-1: Mitigation and monitoring. Construction of a Willits bypass is contingent on Section 7 consultation with U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and U.S. Environmental Protection Agency (USEPA), and permits from the above agencies as well as from California Department of Fish and Game (CDFG). To satisfy conditions of the permits, Caltrans/FHWA will implement mitigation and monitoring. Before implementing mitigation and monitoring, Caltrans/FHWA will develop detailed Mitigation and Monitoring Plans (Plans) in consultation with the state and federal resource agencies, if a build alternative is selected. The Plans will include mitigation for impacts to special-status species and their habitats, including wetlands and other waters of the United States. The Plans will include: 1) the goals of mitigation; 2) performance standards; 3) final success criteria; 4) implementation methods; 5) maintenance activities; 6) monitoring methods; and 7) contingency measures to be implemented if the proposed success criteria are not met. The mitigation measures shall be specific to the species affected. Some species-specific measures are listed separately below.

BIO-2. Compensatory Mitigation. Compensatory mitigation ratios will be based on the preferred alternative, and will be developed through coordination with the ACOE, USFWS, NMFS, USEPA, and CDFG. Several potential mitigation sites have been considered and evaluated conceptually. They include mitigation banks and participating in conservation easements, and are summarized below. Caltrans/FHWA will use either or both options and will explore each more fully once the final mitigation requirements have been determined. A final mitigation plan will be adopted before the Final Environmental Impact Report/Statement is distributed.

1. A conservation easement is a legal agreement a property owner makes with a land trust or public agency restricting types and amounts of development and other uses. Each conservation easement is different, tailored to the needs of the owner. Once the conservation easement is finalized, a land trust, nonprofit, or public agency monitors the land to ensure that the provisions are followed. The easement remains in perpetuity with the title, even when the land changes ownership by sale, death, or gift.

SUMMARY OF BIOLOGY MITIGATION MEASURES					
	Build Alternatives				
	C1T	E3	J1T	LT	Designated Borrow Site
Sensitive plant communities	1-6,8,9,13	1-6,8,10,13	1-6,8,9,13	1-6,8,9,13	NA
Special status plants	1-6,11	1-6,12	1-6,11	1-6,11	NA
Waters of the U.S.	1-6,13	1-6,13	1-6,13	1-6,13	NA
Special status wildlife	1-6,9,14	1-6,9,13,15,17	1-6,8,9,19	1-6,9,20	15-17
Other wildlife	8,9,13,21	8,9,13,21	8,9,13,21	8,9,13,21	15
Special status fish	1-7,9,22	1-7,9,22	1-7,9,22	1-7,9,22	22
Invasive plant species	23	23	23	23	23

NA – The designated borrow site does not require biological mitigation measures for this impact area.

2. Mitigation banking is another option being explored by Caltrans. Caltrans currently is in discussions with a private mitigation banking organization that had identified land in the project area for restoration or protection of habitats, preserved in perpetuity, that would provide compensatory mitigation for the Willits Bypass Project, including for impacts to the designated borrow site which is spotted owl habitat.

3. Caltrans will implement on-site mitigation, such as re-vegetating the Designated Borrow Site (see BIO-15) with north-slope forest plant species. While this would be a long-term solution in this instance, it would eventually restore the site's Northern spotted owl habitat.

Caltrans/FHWA will undertake preservation and enhancement of one or more large plots of land providing a variety of biological resource values (e.g., wetlands, wildlife habitat, etc.) may mitigate for a large proportion of the total project-related impacts. Caltrans/FHWA are investigating land that appears to be suitable and available in the project area for compensatory mitigation are being investigated. These lands will be suitable for plant and animal species that would be impacted by the project (such as wetlands, riparian habitat, oak woodlands, grasslands, and spotted owl habitat).

These sites are being considered and conceptually evaluated and will be explored more fully once the final mitigation requirements have been determined. A final mitigation plan will be adopted before the Final EIR/EIS is distributed. Mitigation for wetland impacts will occur in the valley to the extent feasible. A combination of preservation, creation, and enhancement will be pursued to provide a sustainable mitigation plan that will reduce overall impacts and have long-term benefits for fish and wildlife resources.

BIO-3: During the final design phase of the selected alternative, Caltrans biologists, Caltrans design engineers, and resource agencies will work together on additional design solutions that will avoid or minimize impacts to sensitive biological resources.

BIO-4: Caltrans/FHWA will establish and delineate Environmentally Sensitive Areas (ESAs) on project plans and specifications to protect sensitive biological resources adjacent to the construction corridor by prohibiting construction activities in those areas.

BIO-5: Caltrans/FHWA will develop and implement an environmental awareness and training program that informs construction workers how to identify and avoid sensitive species.

BIO-6: Caltrans/FHWA will have a qualified biologist monitor construction activities in sensitive biological resource areas to ensure permit conditions and mitigation requirements are adhered to.

BIO-7: Caltrans/FHWA will limit in-stream construction activities to low-flow conditions.

BIO-8: Caltrans/FHWA will replace oak woodland affected by the project. First, Caltrans/FHWA will prepare a mitigation plan that will be approved by CDFG. Caltrans/FHWA will comply with California Department of Fish and Game's Oak Protection Guidelines for mitigation of oak impacts. These guidelines recommend planting acorns or oak seedlings at a replacement ratio of 5:1 for oak trees > 2 inches diameter at breast height (dbh) impacted and 1:1 for oak trees < 2 inches dbh. Caltrans/FHWA may restore oak woodlands locally by planting oaks on suitable habitat sites and/or purchasing private land that will be transferred to a conservancy. Caltrans/FHWA will maintain and protect oak mitigation areas in perpetuity through

SUMMARY OF BIOLOGY MITIGATION MEASURES					
	Build Alternatives				
	C1T	E3	J1T	LT	Designated Borrow Site
Sensitive plant communities	1-6,8,9,13	1-6,8,10,13	1-6,8,9,13	1-6,8,9,13	NA
Special status plants	1-6,11	1-6,12	1-6,11	1-6,11	NA
Waters of the U.S.	1-6,13	1-6,13	1-6,13	1-6,13	NA
Special status wildlife	1-6,9,14	1-6,9,13,15,17	1-6,8,9,19	1-6,9,20	15-17
Other wildlife	8,9,13,21	8,9,13,21	8,9,13,21	8,9,13,21	15
Special status fish	1-7,9,22	1-7,9,22	1-7,9,22	1-7,9,22	22
Invasive plant species	23	23	23	23	23

NA – The designated borrow site does not require biological mitigation measures for this impact area.

conservation easement, deed restriction or other equivalent measure as discussed in Mitigation Measure BIO-2.

BIO-9: Caltrans/FHWA will mitigate for impacts to riparian forest habitat through creation and restoration or enhancement (including expansion) of existing degraded riparian habitat at a ratio agreed upon in consultation with CDFG, USFWS, NMFS, and USEPA. Caltrans/FHWA will protect riparian forest mitigation areas in perpetuity through conservation easements, deed restrictions or other equivalent measures as discussed in Mitigation Measure BIO-2. The primary goal of the Mitigation and Monitoring Plan for riparian communities will be to ensure that no permanent loss of habitat values occurs as a result of the project and that the temporal loss of habitat is adequately mitigated.

BIO-10: Caltrans/FHWA will mitigate for loss of or disturbance to native bunchgrass grassland by implementing the mitigation measures set forth in the Mitigation and Monitoring Plan. The Plan will include measures to mitigate for native bunchgrass grassland in areas of existing annual grassland and other areas that would support native grasses; or on cut and fill slopes, following construction.

BIO-11: Caltrans/FHWA will mitigate for loss of Baker's meadowfoam by implementing the mitigation measures set forth in the Mitigation and Monitoring Plan. The Plan's mitigation measures will include enhancing existing degraded populations and establishing new populations within suitable unoccupied habitat in and/or near the Little Lake Valley. The Plan may include purchasing land in Little Lake Valley that will provide opportunities to enhance and create stands of Baker's meadowfoam. Caltrans/FHWA will develop methods of enhancement and creation of Baker's meadowfoam habitat through consultation with CDFG and California Native Plant Society (CNPS) botanists who have specific knowledge of the microhabitat requirements for this species. Baker's meadowfoam appears to be very adaptable to disturbed conditions, however, the California Native Plant Society (CNPS) reports that CDFG and others have found that transplanting was effective in only 15 percent of the cases studied; therefore, CDFG is expected to apply rigorous success criteria to creation efforts.

BIO-12: Caltrans/FHWA will mitigate for the loss of glandular western flax by implementing the mitigation measures that are set forth in the Mitigation and Monitoring Plan. The Plan will include enhancing existing degraded populations and establish new populations within suitable unoccupied habitat in and/or near Little Lake Valley. The Plan may include purchasing land in Little Lake Valley that will provide opportunities to enhance and create stands of glandular western flax. Caltrans/FHWA will develop methods of enhancement and creation of glandular western flax habitat through consultation with CDFG and California Native Plant Society (CNPS) botanists who have specific knowledge of the microhabitat requirements for this species.

BIO-13: Caltrans/FHWA will mitigate for impacts to wetlands and other waters of the U.S., by implementing the mitigation measures that are set forth in the Mitigation and Monitoring Plan. The Plan will include compensation requirements for unavoidable impacts to wetlands and other waters of the U.S., based on the selected alternative. The Plan will provide specific mitigation details, including the approved mitigation sites, and implementation design and construction, and a minimum five-year monitoring plan. Caltrans/FHWA will develop appropriate mitigation measures in coordination with the resource agencies and will implement the measures to offset project effects. The goal of the mitigation plan is no net loss of wetland habitat functions and values. Compensation wetlands will be designed to equal or exceed the values of wetlands impacted by the project. Mitigation for the loss of wetlands and

SUMMARY OF BIOLOGY MITIGATION MEASURES					
	Build Alternatives				
	C1T	E3	J1T	LT	Designated Borrow Site
Sensitive plant communities	1-6,8,9,13	1-6,8,10,13	1-6,8,9,13	1-6,8,9,13	NA
Special status plants	1-6,11	1-6,12	1-6,11	1-6,11	NA
Waters of the U.S.	1-6,13	1-6,13	1-6,13	1-6,13	NA
Special status wildlife	1-6,9,14	1-6,9,13,15,17	1-6,8,9,19	1-6,9,20	15-17
Other wildlife	8,9,13,21	8,9,13,21	8,9,13,21	8,9,13,21	15
Special status fish	1-7,9,22	1-7,9,22	1-7,9,22	1-7,9,22	22
Invasive plant species	23	23	23	23	23

NA – The designated borrow site does not require biological mitigation measures for this impact area.

other waters of the U.S. may include Caltrans/FHWA purchase of lands within Little Lake Valley, or at off-site locations that are approved by the resources agencies, that will provide opportunities to enhance and create wetland features and stream channels. Caltrans/FHWA will develop methods for creation and enhancement of wetlands and other waters of the U.S. through consultation with the ACOE and CDFG. In addition, Caltrans/FHWA will consult with hydrologists and fluvial geomorphologists who are familiar with the creation and enhancement of stream channels and wetland features in the region.

BIO-14: Prior to construction during the spring breeding season, Caltrans will arrange to have a qualified biologist conduct preconstruction surveys of impact areas to check for nesting birds, including California yellow warbler and yellow-breasted chat. If nesting activity is detected, Caltrans will establish buffers around the nest. The buffer width will be determined through consultation with CDFG. The buffer shall be maintained and construction activities shall avoid nest sites until the biologist determines that the young have fledged or nesting activity has ceased.

BIO-15: Caltrans/FHWA will mitigate for mixed north-slope forest by implementing the mitigation measures that are set forth in the Mitigation and Monitoring Plan. The

Plan will require Caltrans/FHWA to plant trees to recreate the forest species composition and canopy cover that would be removed on or adjacent to the site. Also, because of the length of time for trees to mature and provide suitable habitat value, the plan will include obtaining parcels near the project area with existing mature north-slope forest habitat. The Caltrans project team has identified acreage in the project area that may be suitable for a conservation easement or mitigation bank.

BIO-16: Caltrans will conduct additional pre-construction protocol-level surveys to determine if Northern spotted owls have reoccupied the project area. If so, or if the forest habitat provides suitable nesting or foraging habitat, Caltrans/FHWA shall enter into Section 7 (Endangered Species Act) consultation with the USFWS for Northern spotted owl. Caltrans/FHWA will document the results of all protocol surveys conducted for Northern spotted owls; identify known and historic nest locations; quantify existing suitable nesting and foraging habitat and the amount of suitable habitat that will be removed by the project. Caltrans/FHWA will consult with USFWS on specific mitigation measures.

BIO-17: If an active Northern spotted owl nest is found within 0.8 km (0.5 mi) of any proposed construction activity, USFWS may require that Caltrans establish a 0.8 km (0.5 mi) diameter buffer around the activity center during the breeding season (February 15 to August 31).

BIO-18: If California yellow warbler nesting activity is detected, Caltrans will establish buffers around each nest. The buffer width will be determined through consultation with CDFG. The buffer shall be maintained and construction activities shall avoid nest sites until the Caltrans biologist determines that the young have fledged or nesting activity has ceased.

BIO-19: For white-tailed kites and other raptors, Caltrans shall conduct a pre-construction survey during the spring or early summer (April-early July) to determine whether nesting raptors (e.g., white-tailed kites, Cooper's hawks, red-tailed hawks, red-shouldered hawks) are present on or within 0.40 km (0.25 mi) of the selected alternative. If the survey detects nesting raptors on or within 0.40 km (0.25 mi) of the selected alternative, Caltrans will maintain buffer areas and seasonal construction constraints (e.g., no work during active nesting periods) in coordination with CDFG.

SUMMARY OF BIOLOGY MITIGATION MEASURES					
	Build Alternatives				
	C1T	E3	J1T	LT	Designated Borrow Site
Sensitive plant communities	1-6,8,9,13	1-6,8,10,13	1-6,8,9,13	1-6,8,9,13	NA
Special status plants	1-6,11	1-6,12	1-6,11	1-6,11	NA
Waters of the U.S.	1-6,13	1-6,13	1-6,13	1-6,13	NA
Special status wildlife	1-6,9,14	1-6,9,13,15,17	1-6,8,9,19	1-6,9,20	15-17
Other wildlife	8,9,13,21	8,9,13,21	8,9,13,21	8,9,13,21	15
Special status fish	1-7,9,22	1-7,9,22	1-7,9,22	1-7,9,22	22
Invasive plant species	23	23	23	23	23

NA – The designated borrow site does not require biological mitigation measures for this impact area.

BIO-20: If nesting activity is detected, Caltrans will establish buffers around each nest. The buffer width will be determined through consultation with CDFG. The buffer shall be maintained and construction activities shall avoid nest sites until the Caltrans biologist determines that the young have fledged or nesting activity has ceased.

BIO-21: Caltrans will construct wildlife under-crossings, if required by CDFG, that would be suitable for use by deer. The location, number and design of the under-crossings will be determined through consultation with CDFG.

BIO-22: In addition to preparing a Storm Water Pollution Prevention Plan (SWPPP), Caltrans shall implement the following measures to minimize disturbances of aquatic resources:

- All construction-related materials shall be stored in designated staging areas at least 100 feet from perennial waterways and drainages.
- Refueling and vehicle maintenance shall be performed at least 100 feet from creeks and other water bodies.

- Operation of heavy equipment shall be minimized in perennial creeks (to the greatest extent possible).
- Temporary sedimentation barriers, such as sandbags or siltation fencing, shall be installed to minimize the amount of silt entering the creeks and any ephemeral drainages with water present in the channel. The location of these barriers shall be determined by the resident engineer and environmental monitor, and shall be clearly marked in the field before construction activities begin.
- Additional Best Management Practices shall be implemented to prevent runoff from adjacent lands from flowing across construction areas; slow down the runoff traveling across construction sites; remove sediment from onsite runoff before it leaves the site; and provide soil stabilization.

BIO-23: To reduce the spread of invasive non-native plant species and minimize the potential for disturbance activities to decrease palatable vegetation for wildlife species, the project will include the following protection measures to comply with Executive Order (EO) 13112:

- Prior to construction, surveys will be conducted in the construction corridor (NEPA preferred alternative) for populations of plants listed on the California Department of Food and Agriculture (CDFA) noxious weed list. Populations of noxious weeds will be mapped. This will establish a baseline from which to evaluate the possible impacts of this construction on the spread of these invasive exotic plants or the establishment of other invasive exotic plants.
- Disposal of soil and plant materials from any areas that supports invasive species will not be allowed in areas that support stands dominated by native vegetation.
- Plant species used for erosion control will consist of native, non-invasive species or non-persistent hybrids that will serve to stabilize site conditions and prevent invasive species from colonizing.
- All equipment that was used in identified invasive species areas will be washed prior to entering other project areas that are relatively weed free to prevent the spread of invasive weeds. Resident Engineers will be educated on weed identification and the importance of controlling and preventing the spread of identified invasive non-native species. Gravel and/or fill material to be placed in relatively weed-free areas will come from weed free sources. Certified weed-free imported materials (or rice straw in upland areas) will be used.

SUMMARY OF BIOLOGY MITIGATION MEASURES					
	Build Alternatives				
	C1T	E3	J1T	LT	Designated Borrow Site
Sensitive plant communities	1-6,8,9,13	1-6,8,10,13	1-6,8,9,13	1-6,8,9,13	NA
Special status plants	1-6,11	1-6,12	1-6,11	1-6,11	NA
Waters of the U.S.	1-6,13	1-6,13	1-6,13	1-6,13	NA
Special status wildlife	1-6,9,14	1-6,9,13,15,17	1-6,8,9,19	1-6,9,20	15-17
Other wildlife	8,9,13,21	8,9,13,21	8,9,13,21	8,9,13,21	15
Special status fish	1-7,9,22	1-7,9,22	1-7,9,22	1-7,9,22	22
Invasive plant species	23	23	23	23	23

NA – The designated borrow site does not require biological mitigation measures for this impact area.

- Following construction, Caltrans will conduct a three-year program of invasive exotic weed monitoring, which will consist of conducting surveys every six months during the spring and late summer. The percent cover of invasive exotic plant species occurring within the construction corridor must not exceed the cover of invasive exotic plant species found outside the construction corridor, or the cover found in the construction corridor prior to construction. Monitoring potential invasive species will occur only where ground was disturbed within the construction corridor.
- If invasive weeds show evidence of spreading, Caltrans will develop an Invasive Weed Eradication Plan, targeting identified invasive species on the CDFA list. Herbicides would not be used since Caltrans does not use herbicides in Mendocino County.

Appendix D Notice of Preparation Distribution List

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 1, P.O. BOX 3700
EUREKA, CA 95502-3700
TDD PHONE 707/445-6463
(707) 445-6416

December 15, 1989

1-Men-101-43.5/51.3
01101 262000
Const. 4-Lane
Freeway

On December 15, 1989 the groups and individuals on the attached list received a Notice of Preparation, environmental checklist and discussion of potential impacts.

Attachment

TAA:bsb

Aerospace Indus. 60-24 Taskfr.
Lockheed Aircraft Corporation
P. O. Box 551
Burbank, CA 91503
13
5

Aerospace Indus. 60-24 Taskfr.
Northrop Aerospace
3901 West Broadway
Hawthorne, CA 90250
13
5

Aerospace Indus. 60-24 TaskFr.
Rohr Corporation
P. O. Box 878
Chula Vista, CA 92012
13
5

Area Director, Sac. Area
Bureau of Indian Affairs
2800 Cottage Way
Sacramento, CA 95825
13
4

Assit. Vice President
Budget, Analysis, & Planning
247 University Hall
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13
5

Budget, Analysis, and Plan.
University of California
247 University Hall
Berkeley, CA 94720
13
4

Business Manager
Oper. Eng. Local #3
474 Valencia Street
San Francisco, CA 94103
13
4

Calif. Inst. of Public Trans.
42 Camino Enginas
Orinda, CA 94563
13

California Highway Patrol
Commander
540 Orchard Ave.
Ukian, CA 95482
13
4

California Research
Suite 300
1024 10th Street
Sacramento, CA 95814
13
5

California West. Rail.
Foot of Laurel
[illegible]

Chamber of Commerce
15 South Main
[illegible]

4
8

Chief, Airports Branch
Fed. Aviation Admin.
831 Mitten Road
Burlingame, CA 94010
13
4

Chief, Bur. of School Fac.
Dept. of Education
721 Capitol Mall
Sacramento, CA 95814
13
5

Chief, Envir. Impact Assess.
U.S. Geo. Survey; MS-104
Reston, VA 22092
13

Chief, Office of Fac.
Dept. of General Services
1015 L Street
Sacramento, CA 95814
13
5

Chief, West. Field Oper. Cen.
Bureau of Mines
East 315 Montgomery
Spokane, WA 99207
13

Commander
12th Coast Guard District
Government Island
Alameda, CA 94501
13

Dept. of Forestry
17501 North Highway 101
Willits, CA 95490
123
4
8

Dept. of Health & Human Serv.
Special Programs Group
Cen. for Env. Health
Atlanta, GA 30333
13
4

Dept. of Parks & Rec.
Office of Hist. Preserv.
P. O. Box 94296
Sacramento, CA 94296-0001
13
4

Dir., Office of Ecol. & Con.
U.S. Dept. of Commer., Rm 6800
Nat. Ocean. & Atmos. Admin.
Washington, DC 20230
13
4

Director
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1416 Ninth St., Rm. 1336
Sacramento, CA 95814
13
5

Director
Dept. of Food & Agric.
1220 N Street
Sacramento, CA 95814
13
5

Director
Dept. of Health Services
744 P Street
Sacramento, CA 95814
13
5

Director
Dept. of Water Resources
1416 Ninth St.
Sacramento, CA 95814
13
5

Director
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13
4

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13
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Executive Director
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Executive Sec.
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13
4
8

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[illegible]

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13
45

13
45

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Honorable Barry Keene
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Represent. in Congress
The Eureka Inn, 7th & F
Eureka, CA 95501
13
45

Honorable Pete Wilson
United States Senator
613 Dirksen
Washington, DC 20510
13
45

Honorable Pete Wilson
United States Senator
2040 Ferry Bldg.
San Francisco, CA 94111
13
45

Lillian Brown
c/o Willits News
P. O. Box 628
Willits, CA 95490
13
4

Linda Bailey
Men. Co. Water Agency
Courthouse
Ukiah, CA 95482
13
4

Local Agency Form. Comm.
Courthouse
Ukiah, CA 95482
13
4

Manager, Dist. & Traffic
D/151,CB01 Space Div.
12214 Lakewood Boulevard
Downey, CA 90241
13
5

Manager, Transportation
Douglas Aircraft Company
3855 Lakewood Boulevard
Long Beach, CA 90801
13
5

Men. Co. Bd. of Realtors
406 North School
Ukiah, CA 95482
13
4

Men. County Hist. Soc.
603 West Perkins
Ukiah, CA 95482
13
4
9

Mendocino County Museum
400 E. Commercial Street
Willits, CA 95490
13
4

Mr. Mike Knight
Sherwood Valley Rancheria
1737 South State Street
Ukiah, CA 95482
13
7

Mr. Steven W. Rugg
Rugg's Planning Services
P. O. Box 739
Redwood Valley, CA 95470
13

Mrs. Marge Young
88 W. Oak Street
[illegible]

Ms. Judy Armstrong
P. O. Box 804
[illegible]

Ms. Lynn Lozier
The Nature Conservancy
785 Market Street, 3rd Floor
San Francisco, CA 94103
13
4

Ms. Pat Deltrami
c/o Beverly Sanders Realty
413 Talmage Rd.
Ukiah, CA 95482
13

Ms. Priscilla Hunter, Comm.
Native American Heritage Comm.
P. O. Box 39
Redwood Valley, CA 95470
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Museum of Vertebrate Zoology
2593 Life Sciences Building
Berkeley, CA 94720
13
4

Museum of Vertebrate Zoology
2593 Life Sciences Building
Berkeley, CA 94720
13

National Audubon Society
Peregrine Chapter
P. O. Box 311
Ukiah, CA 95482
13
4

National Park Service
P. O. Box 36063
450 Golden Gate Avenue
San Francisco, CA 94102
13
4

Northwestern Pac. Rail. Co.
One Market Plaza
San Francisco, CA 94105
13
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Office of Envir. Compliance
U. S. Dept. of Energy
1000 Independ. Av SW RM 4G-064
Washington, DC 20585
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Office of Envir. Proj. Review
U. S. Dept. of Interior
18th & "C" Streets, NW
Washington, DC 20240
13
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Paul Clark, Proj. Engin.
Ultramar
525 West 3rd Street
Hartford, CA 93230
13
5

Reg. Administrator
Dept. of HUD
450 Golden Gate Avenue
San Francisco, CA 94102
13

Reg. Director
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825
13

Reg. Director
National Park Service
P. O. Box 36063
San Francisco, CA 94102
13

Reg. Director
U.S. Dept. of Health & Ed.
50 Fulton Street
San Francisco, CA 94102
13

Regional Director
Bureau of Reclamation
P. O. BOx 427
Boulder City, NV 89005
13

Regional Director
Fed. Emer. Mang. Agency
Region 9, Bldg. 105
Presidio, CA 94129
13
4

Regional Forester
U. S. Forest Service
630 Sansome Street
San Francisco, CA 94111
13

Sierra Club
6014 College Avenue
Oakland, CA 94618
13
4
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Sonoma State Univ.
School of Environmental
Studies and Planning
Rohnert Park, CA 94928
13

State Cemetery Board
Suite 88
1470 Howe Avenue

U. S. Dept. of Interior
Spec. Assit. to the Sec.
450 Golden Gate Avenue

U.S. Fish & Wild. Serv.
2800 Cottage Way, Room 1803
Sacramento, CA 95825
13
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Vice Chancellor
Phys. Plan. & Develop.
400 Golden Shore Blvd.
Long Beach, CA 90802
13
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Appendix E Responses to NOP/NOI

United States Department of the Interior

BUREAU OF MINES

WESTERN FIELD OPERATIONS CENTER
EAST 360 3RD AVENUE
SPOKANE, WASHINGTON 99202-1413

TAKE PRIDE IN AMERICA

January 16, 1990

Ms. Deborah L. Harmon, Chief
Environmental Planning Branch
California Department of Transportation
P.O. Box 3700
Eureka, California 95502-3700

Dear Ms. Harmon:

SUBJECT: NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT/STATEMENT FOR WILLITS BYPASS, ROUTE 101, MENDOCINO COUNTY (References: Division 13, Public Resources Code, Section 21080.4 (State); 40 C.F.R. 1501.7 and 1508.22 (Federal))

The checklist used to identify factors which might be impacted by the proposed project did not include natural mineral resources. In a previous letter dated December 4, 1989 (copy enclosed), we indicated mineral properties may be located in the project area. As part of the study, we suggest an assessment be made of possible negative impacts on the development and continued utilization of these resources.

Thank you for the opportunity to comment on this project.

Sincerely,

C. Thomas Hillman

C. Thomas Hillman, Supervisor
Mineral Investigation

Enclosure

United States Department of the Interior

BUREAU OF MINES

WESTERN FIELD OPERATIONS CENTER
EAST 360 3RD AVENUE
SPOKANE, WASHINGTON 99202-1413

TAKE PRIDE IN AMERICA

December 4, 1989

CALTRANS
Environmental Planning Branch
ATTENTION: Willits Freeway
P.O. Box 3700
Eureka, California 95502

Gentlemen:

SUBJECT: ROUTE 101, WILLITS BYPASS, MENDOCINO COUNTY, CALIFORNIA

The Bureau of Mines Mineral Industry Location System (MILS) database shows two mineral properties in T. 18 N., R. 13 W.

1. Southard Ranch - a manganese prospect in section 20.

2. Willits Ready Mix - a sand and gravel producer in the SW1/4 of section 17

Detailed information on these properties is not readily available. As part of the freeway study, an assessment should be made of possible negative impacts on the development and continued utilization of these resources.

Thank you for the opportunity to comment on this proposed project.

Sincerely,

C. Thomas Hillman

C. Thomas Hillman, Supervisor
Mineral Investigation

DANIEL TAYLOR
Museum Director

DOT BROVARNEY
Volunteer Curator

BOBBIE YOKUM
Volunteer Curator

COUNTY OF MENDOCINO
MENDOCINO COUNTY MUSEUM
400 E. Commercial Street
Willits, CA 95490
(707) 459-2736

21 December 1989

Deborah L. Harmon
Chief, Environmental Planning Branch
Department of Transportation
District 1
PO Box 3700
Eureka, CA 95502-3700

Dear Ms. Harmon:

Thank you for the information regarding the environmental review process for the proposed Willits Bypass of the City of Willits in Mendocino County on Route 101.

At this time, I would like to recommend that during the design phase of the project CALTRANS consider approving highway markers that designate the location of the Museum. As a department of local County government, the Mendocino County Museum functions as a cultural and educational facility providing service to both residents of and visitors to Mendocino County.

Please keep me informed as to the design process and the appropriate time when a formal request for this marker can be made by the County of Mendocino.

Sincerely,

Dan Taylor

Dan Taylor
Director

by

DEPARTMENT OF FOOD AND AGRICULTURE
1220 N Street
Sacramento, CA 95814

GEORGE DEUKMEJIAN, Governor

January 5, 1990

Deborah Harmon
Department of Transportation
District 1, P.O. Box 3700
Eureka, California 95502-3700

Dear Ms. Harmon,

Thank you for the opportunity to comment on the forthcoming Draft Environmental Impact Report (DEIR) for a proposed freeway project on new alignment in Mendocino County.

The California Department of Food and Agriculture (CDFA) would appreciate a discussion of the following issues in the DEIR.

1. A complete description of the planning area. This should include current and planned land use designations, the number of acres in agricultural production, soil classifications, cropping history, number of acres of prime farmland, and economic benefit from land in present use.

2. Whether any land under a Williamson Act contract or in an Agricultural preserve is part of, or near to the planning area. How development will affect these designations?

3. The possible mitigation measures to ensure that agricultural land is not prematurely or unnecessarily converted to non-agricultural uses. Will the freeway create agricultural parcels too small to support commercial agricultural operations?

4. The pressure this project could create to convert surrounding agricultural land to urban uses. Can the project be considered precedent setting?

5. What is the cumulative impact of this and other projects in the region?

The lead agency should also solicit comments from concerned local agencies such as the agricultural commissioner's office, the USDA Soil Conservation Service office, and the county Farm Bureau Federation office, since the above issues are not necessarily comprehensive.

The CDFA supports the right of local agencies to develop and implement land-use policy in its area of influence, but also wants to assure that agricultural land is not prematurely and irreversibly lost due to development which is not accurately

assessed for environmental impact.

Sincerely,

Donna McIntosh

Donna McIntosh
Graduate Student Assistant
Agricultural Resources Branch
(916) 322-5227

cc: Office of Planning and Research
Mendocino County Agricultural Commissioner
California Association of Resource Conservation Districts

MENDOCINO COUNTY WATER AGENCY
COURTHOUSE
UKIAH, CALIFORNIA 95482
(707) 463-4589

January 8, 1990

Deborah Harmon
Department of Transportation
District 1
P.O. Box 3700
Eureka, CA 95502-3700

Dear Ms. Harmon;

The staff of the Mendocino County Water Agency would like to offer the following comments in regard to the proposed Willits bypass.

Items 6 and 7 of the Environmental Significance Checklist indicate that there would be no significant increase in the rate of use or depletion of a nonrenewable resource, respectively. We disagree with that assessment.

Large amounts of gravel and sand are required to build freeways. Construction of a Willits bypass will significantly increase the rate of use of gravel and sand in the Willits area.

Gravel has become a scarce resource in the Willits-Ukiah area. Historically, aggregate for road construction has been removed from creekbeds. The Russian River and its tributaries has been seriously depleted of its gravel. In particular, Forsythe Creek has been changed from a gravel bed stream to a clay bed stream.

Tomki Creek, to the east of Willits, is a prime salmon and steelhead spawning area. This watershed has received extensive treatment to stabilize its bed. The Soil Conservation Service (SCS) and California Department of Fish and Game have both invested large sums of money in the process. One use permit to extract gravel has already been granted on Tomki Creek. This permit allows the removal of 15,000 cubic yards of material per year. This is the volume of material that is transported through the reach by SCS estimates. Therefore, we feel that no additional material be removed from Tomki Creek.

Outlet Creek, to the north of Willits, is already being harvested at a substantial rate. It might be expected that by the time the Willits bypass is ready for construction no additional gravel will be available from Outlet Creek.

will not be able to meet the needs of the Willits bypass project in addition to the normal aggregate demand.

We believe that it is appropriate to identify potential sources of aggregate for the bypass and include the effects of the gravel extraction operations on the identified sites.

The staff of MCWA also disagrees with Mandatory Finding of Significance 55. The procurement of gravel from stream channels can produce significant cumulative effects. The deteriorated condition of Forsythe Creek and the Russian River demonstrate this potential.

If you have any questions about this matter please contact Dennis Jackson at (707) 463-4589.

Sincerely,

Dennis Jackson

Dennis Jackson
Hydrologist

cc: Alan Falleri, Planning and Building Services
Weldon Jones, California Department of Fish and Game
Tom Schott, Soil Conservation Service

E OF CALIFORNIA
GEORGE DEUKMEJIAN, Governor

ALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
NORTH COAST REGION
1440 GUERNEVILLE ROAD
TA ROSA, CA 95403
576-2220

January 16, 1990

Ms. Deborah L. Harmon, Chief
Environmental Planning Branch
California Department of Transportation
District 1, P.O. Box 3700
Eureka, CA 95502-3700

Dear Ms. Harmon:

Subject: Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for Willits Bypass Project

We have received and reviewed the NOP and additional information describing the proposed Willits Bypass Project in Mendocino County. After review of the project description, we have the following comments regarding preparation of an EIR and water quality impacts:

1. We will require a Report of Waste Discharge (ROWD) for the Bypass project. After review of the ROWD, which should include the final EIR, we will issue Waste Discharge Requirements (WDR) or waive WDR with conditions;

2. The EIR should contain sufficient information to demonstrate that the Bypass project will comply with the Water Quality Control Plan for the North Coast Region. Specifically, the environmental document must include demonstration of compliance with the following waste discharge prohibitions regarding construction activities:

   a. The discharge of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature into any stream or watercourse in the basin in quantities deleterious to fish, wildlife, or other beneficial uses is prohibited.

   b. The placing or disposal of soil, silt, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature at locations where such material could pass into any stream or watercourse in the basin which would be deleterious to fish, wildlife, or other beneficial uses is prohibited.

   The prohibitions against discharge are applicable to any construction work and erosion control facilities proposed at this project. The prohibitions should be understood as guidance in the preparation of project specifications and contract provisions.

3. Each alignment alternative will include disturbance of readily erodible soils and instream work which may impact water quality. The EIR should recognize this problem and indicate specific measures for controlling discharges of soil and silt to surface waters. Extraordinary soil, slope, creek crossings, and/or wetland features may require extraordinary erosion control and water quality protective measures;

4. Experience gained by CALTRANS from the Redwood Park Bypass Project (RPBP) should be employed within this project as follows:

   a. The EIR should include a description of those erosion control and water quality protection measures which were effective in the RPBP that will also be implemented in this project; and

   b. The EIR should acknowledge problems which occurred during the RPBP, the impacts to water quality, and how similar impacts will be avoided with this project.

   The success of the proposed measures is contingent on conscientious control of the day-to-day construction work and site conditions prior to wet weather.

5. Preventive measures, response, cleanup methods and impacts to water quality due to hazardous substance spills (specifically, petroleum products) should be addressed in the EIR. This subject should include transportation and storage of these materials.

Thank for this opportunity to comment. If you have any questions, please feel free to call me at (707) 576-2220.

Sincerely,

Cecile N. Bryant
Water Resource Control Engineer

CNB:pcg/bypass2

ND HALL
IRECTOR

TELEPHONE
707-463-4281

COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES
MAILING ADDRESS: COURTHOUSE
UKIAH, CALIFORNIA 95482

January 16, 1990

Deborah L. Harmon
Department of Transportation
District 1, P.O. box 3700
Eureka, CA 95502-3700

Re: Freeway Bypass of the City of Willits, Route 101
Notice of Preparation

Dear Ms. Harmon:

In response to your request for comments, the Mendocino County Department of Planning and Building Services has reviewed the Project Study Report and the Notice of Preparation for the proposed construction of the Route 101 Freeway bypass of the City of Willits. In reviewing the environmental significance checklist and preliminary discussion of potential impacts this office has prepared responses to the checklist. Please note that the following comments correspond to the environmental significance checklist provided by your office. The responses provided below are numbered to coincide to the appropriate number in the checklist as follows:

PHYSICAL

1. The valley alternatives (A, B, & C) would involve areas of fill for the proposed interchanges as well as any fill involving the elevation of the proposed freeway bypass above the flood plain. The topography of the area west of Willits under alternatives D & E may be expected to change as a result of extensive cuts and fills due to slope of the topography. The construction of either of these two alternatives may create problems with existing drainage facilities.

4. Sedimentation and siltation of streams may result from erosion of exposed soils in cuts and fills. This would especially be a concern with alternatives D & E.

9. As in number 4 above, streams which drain into the Little Lake Valley may be affected by any of the alternatives. Appropriate mitigation measures should be taken to minimize the impacts upon the streams.

10. All alternatives (A, B, C, D, & E) have the potential to encroach upon the flood plain. Cuts and fills associated with the proposed project may have the potential to affect base flood elevations within the Little Lake Valley. Appropriate mitigation measures should be taken to ensure that impacts upon the flood plain are addressed. The Federal Emergency Management Agency (FEMA) should also be notified of the proposed project.

11. As mentioned under Item 4, erosion and siltation may occur which could potentially affect surface water resources in the valley. Appropriate mitigation measures should be developed to minimize the impacts.

16, 17, 18 Temporary construction activities may result in degradation of air quality within the valley; i.e., dust generated from the movement and excavation of earth and emissions from any asphalt plant(s) utilized for the construction. The Mendocino County Air Pollution Control District should also be consulted to ensure compliance with the standards established by the Air Pollution Control District.

The California Department of Transportation (Caltrans) has indicated in the discussion of potential impacts that overall air quality may benefit with the reduction of congestion.

11 Year Thod

However, the long term impacts on air quality should also be evaluated, in that the proposed project will allow for increased traffic volumes to traverse the area thereby possibly resulting additional air quality degradation.

19. The proposed project may result in increased noise levels within the project area which could adversely affect existing residential areas (more specifically alternatives D & E). Appropriate mitigation measures should be examined and incorporated into the project to reduce the impacts on residential areas (i.e., utilization of earth berms, noise walls etc.). Further, impacts of increased noise levels may affect wildlife in the Little Lake Valley should alternative A, B, or C are implemented. Further study and coordination with the Department of Fish and Game should be done addressing this issue.

BIOLOGICAL Items 22-29

Further biological and botanical study will need to be conducted to determine the presence of any rare or endangered botanical species or wildlife including any migratory wildlife which utilizes the Little Lake Valley drainage basin.

With regards to Item Number 26, the sources of the necessary aggregate materials for road base and construction will need to be identified. Any new or expanded surface mining operations necessary to supply materials for the project would themselves create significant environmental impacts.

SOCIAL AND ECONOMIC

43. The proposed project would accommodate additional traffic within the region as the area becomes more accessible.

In examining alternatives D & E, they do not appear to have considered the traffic flows from the Brooktrails Subdivision. Under both of these alternatives, traffic will still have to utilize Sherwood Road into the city of Willits and travel north or south through the city to access onto any of the proposed interchanges. The Department of Transportation should examine the possibility for an interchange at Sherwood Road which would directly benefit those living in the Brooktrails subdivision and vicinity. Considering this as a modification, traffic flows may be considerably alleviated between the Brooktrails subdivision and

the City of Willits. Alternatives A, B, & C have not considered the issue of traffic flows from the Brooktrails Subdivision. The long-term impacts of complete build out of the Brooktrails Subdivision should further be examined. Traffic generated from alternatives A, B, & C may have the potential to create additional traffic in the vicinity of the proposed Highway 20 interchange/extension. Further study may be required.

46. Alternatives C, D, & E may have the potential to affect the California Western Railroad and The Eureka Southern Railroad. The two railroad companies should be consulted for potential impacts and concerns.

30, 31, 47 In evaluating the long term result of the proposed project, consideration for potential commercial as well as residential developments should be examined. Regardless of which alternative is chosen, the proposed project can be considered "growth inducing". The potential for residential and commercial development within close proximity of the proposed freeway access points is likely to occur. Further study is necessary pertaining to potential inconsistencies with the Mendocino County General Plan Land Use Amendment.

51. Dust generated from the construction phase of the project may have significant environmental impacts upon the air quality of the area. The Mendocino County Air Pollution Control District should be consulted for specific applicable standards and regulations. Grading should be done in accordance with good engineering practices and in such a manner to minimize impacts on existing drainage facilities.

53, 55 As previously mentioned, sources of aggregate materials to be utilized for the proposed project should be clearly identified. Potential impacts may occur on the area's streams and channels as a result of aggregate mining. Such impacts may have significant adverse environmental impacts on the fisheries resources including but not limited to vegetation and water quality.

I certainly hope that these comments will aid you in the preparation of you environmental documents. If you should have any further questions or wish further input from this office, please feel free to contact me at (707) 463-4281.

Further, I would like to thank you for the opportunity to review and comment on this proposal.

Sincerely,

Ignacio Gonzalez

Ignacio Gonzalez
Planner II

IG:cec

SHERWOOD VALLEY BAND OF POMO INDIANS

Ms. Deborah L. Harmon, Chief
Environmental Planning Branch
Department of Transportation
District 1, P.O. Box 3700
Eureka, CA 95502-3700

January 16, 1990

Dear Ms. Harmon,

I take this opportunity to officially comment on the Notice of Preparation of Environmental Impact Report/Statement that has been issued by your agency regarding the proposed freeway bypass of the City of Willits in Mendocino County on Route 101. Our Tribal Council has reviewed the environmental significance checklist and Notice of Preparation distributed by your office on December 15, 1989, and we have had representatives present at the public meetings held to discuss this project.

Our Tribe has no comment or objection to the construction of Route "A", which we understand to be the preferred route. However, your environmental significance checklist fails to identify several significant impacts that will occur to our community and to the community of southeastern Willits should alternatives "D" or "E" be chosen. Specifically, alternatives "D" or "E" will significantly impact the social, economic, cultural and physical environment of the new Sherwood Valley Rancheria, which is located directly west of the Meadowbrook subdivision (please refer to attached map). Our Tribe is currently in the process of constructing 35 housing units, a community center and a Tribal Arts and Crafts Store on this 58 acre site. The site is to become a new residential community to benefit our membership and has been the focus of our development efforts since its acquisition by the United States of America for this purpose in 1988.

The construction of Alternatives "D" or "E" would occur directly adjacent to our new Rancheria and would be disastrous to our plans for development of the site. High levels of noise that would result from the freeway would be excessive throughout the site and would render the site uninhabitable for the families identified to live in the 35 units of housing. The aesthetic sanctity of the site would be damaged irreversibly by construction of a freeway and would change forever the rural sense of privacy the site now possesses. Air quality in the area will undoubtably deteriorate as well, subjecting visitors and future residents of the site to an unhealthy living environment. Major cuts and fills of soils would be required to construct the freeway in this area, and although your plans for drainage are not presently known to us, it may be prudently anticipated that the freeway's impervious surface and soil disruptions will cause a substantial increase in runoff onto our property, where off-site discharge is already a serious consideration and a potential impact for downstream properties. Additionally, there are historic and archeological resources and sites in the area of your proposed construction that this Tribe desires to protect, and would not want to see

2141 South State Street - Ukiah, California 95482
(707) 468-1337

disrupted in any way.

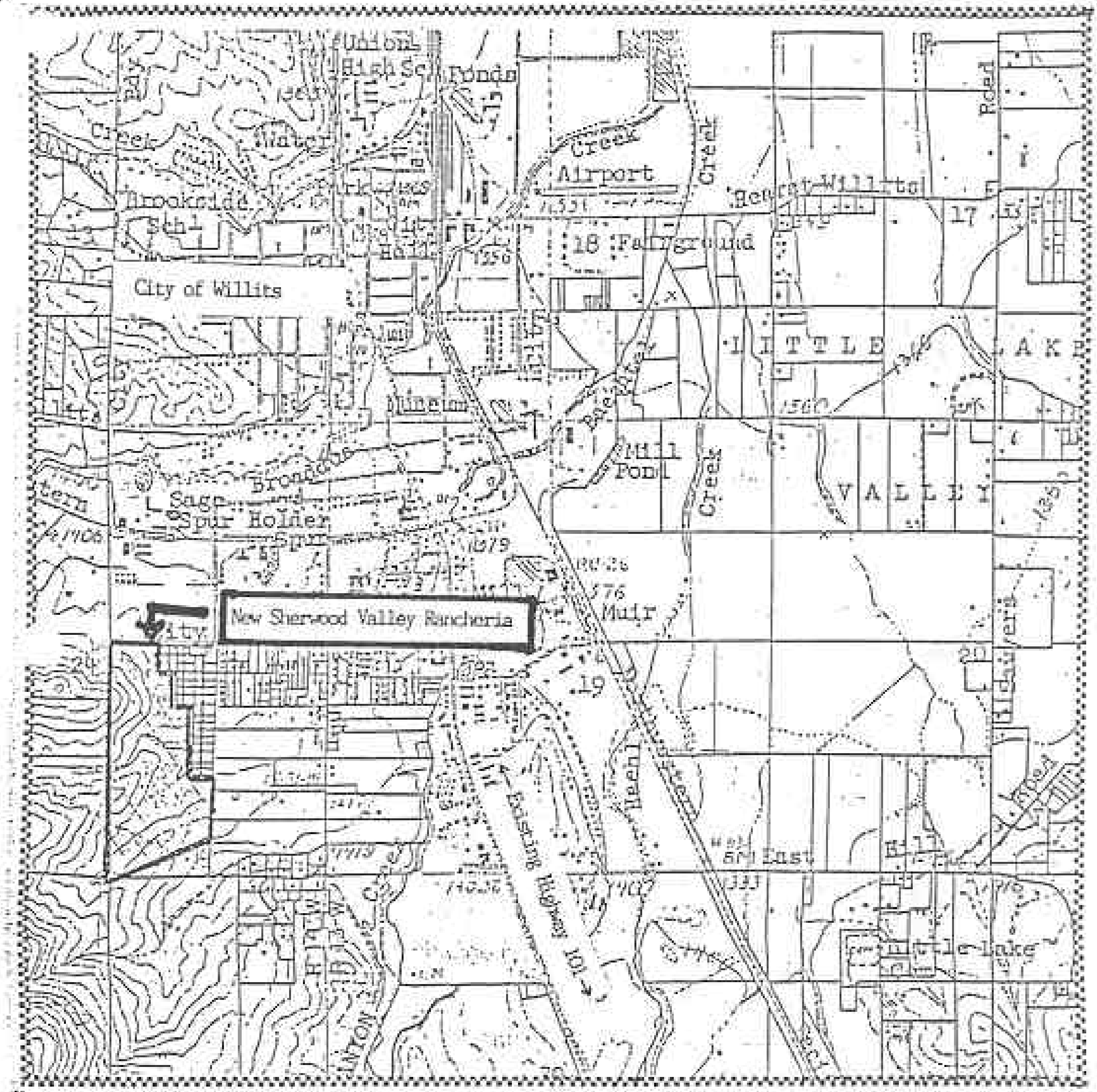
In summary, the Sherwood Valley Band of Pomo Indians is firmly against the construction of the Willits by-pass along alternative routes "D" or "E". We believe that it would not be possible to mitigate the impacts to our community that would result from construction of the project in that location and will do everything within our power to prevent your proceeding along either of those alignments. However, our Tribe has no objection to CALTRANS proceeding along the presently preferred route of alternative "A".

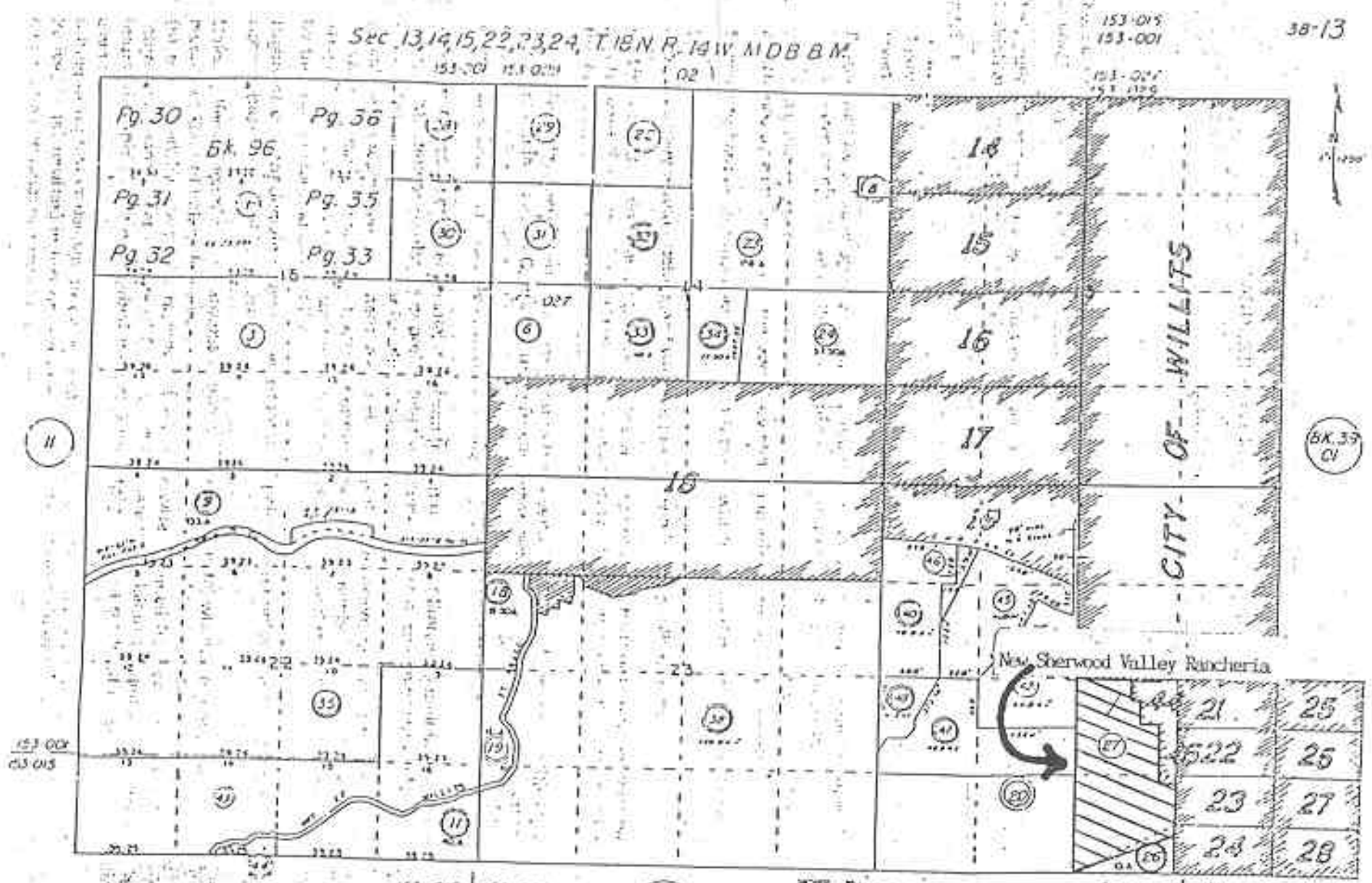
I would appreciate a direct response to this letter, and also expect to be kept informed of all progress CALTRANS makes with regard to this project.

Respectfully,

Mike Knight

Mike Knight
Tribal Chairperson


City of Willits
New Sherwood Valley Rancheria
Existing Highway 101
Union High Sch
Ponds
Creek
Airport
Brookside Sch
Hall
18 Fairground
17
LITTLE LAKE
VALLEY
Mill Pond
Sage
Spur Holmer
Muir
19
20
Little Lake


Sec 13,14,15,22,23,24, T 16N R 14W MDB&M
153-015
153-001
38-13
Pg. 30
Bk. 96
Pg. 36
Pg. 31
Pg. 35
Pg. 32
Pg. 33
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CITY OF WILLITS
BK. 39 CI
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New Sherwood Valley Rancheria
21
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522
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153 015
153-029
20
WESTERN TITLE INSURANCE COMPANY
MENDOCINO COUNTY OFFICE
THIS IS NOT A SURVEY OF THE LAND
BUT IS COMPILED FROM DATA SHOWN
BY THE PUBLIC RECORDS.
Assessor's Map
County of Mendocino, Calif.
REVISED 1-17-86

Memorandum

To : Ms. Deborah L. Harmon
Chief, Environmental Planning Branch
Department of Transportation, District 1
P. O. Box 3700
Eureka, CA 95502-3700

Date : February 9, 1990

From : Department of Fish and Game

Subject: Notice of Preparation (NOP) of an Environmental Impact Report/Environmental Impact Statement (EIR/EIS) Regarding the Proposed Highway 101 Willits Bypass, Mendocino County, SCH 90030006

Department of Fish and Game personnel have reviewed the Notice of Preparation (NOP) of a (DEIR/DEIS) for the proposed Highway 101 Bypass for the City of Willits. In addition, Department personnel have visited the project site and attended a scoping meeting held at Willits on December 5, 1989.

CalTrans has identified a number of alternatives regarding new alignments. Depending upon a given alternative, wetland, coniferous woodland and/or oak woodland habitats may be adversely impacted. While all of these habitat types are important to fish and wildlife species, we are particularly concerned over any alternative that would adversely impact existing wetlands. It is the policy of our Department to seek to provide for the protection, preservation, restoration, enhancement, and expansion of wetland habitat in California. Further, it is the policy of our Department to strongly discourage development in our conversion of wetlands.

As currently proposed, Alternatives A, B, C, and D, will impact wetland habitats within Little Lake Valley. Baker's Meadowfoam (Limnanthes bakeri), and North Coast Semaphore Grass (Pleuropogon hooverianus), are State listed rare plants and are Federal Candidate 2 species. Both are found within Little Lake Valley.

Little Lake Valley is an important foraging area for peregrine falcons, wintering bald eagles, and a variety of waterfowl. Tule elk are found to the east, and can be expected to use the valley in the future as their territory expands. It is likely that elk will frequently cross Alternative Route B. This could present a substantial traffic hazard.

Several alternative routes will require various creek crossings. Many of these streams provide valuable spawning and rearing habitat for chinook salmon, steelhead trout, and other non-game fish species. In addition to supporting viable fish populations, these streams maintain lush riparian corridors which are important to many species of wildlife. Our Department, in conjunction with other government agencies and private groups, has worked diligently on maintaining and rehabilitating streams in the Willit's vicinity for benefit of fish and wildlife. We discourage any alternative which would cause long-term detriment to these streams.

The Department has the following comments regarding the scope and content of the proposed DEIR:

1. Create transparent overlays for purposes of identifying locations of streams, wetlands, State/Federal listed plants and alternative routes. Overlays will be useful in assessing various impacts associated with each alternative route. Biotic impacts for each alternative should be quantified in the text, as well as in a summary table.

2. A complete biological survey shall be conducted for purposes of updating the distribution of all sensitive plants, birds and mammals listed in the Natural Diversity Data Base, as well as other fish and wildlife species which may be adversely impacted as result of this project. Surveys should document seasonal use patterns and provide estimates of relative abundance of species affected by the project.

3. A mitigation plan should be developed for each alternative with the objective of identifying specific measures for mitigation losses of plant, fish and/or wildlife species and their habitats. Our Department is available for consultation regarding the scope and content of the mitigation plans.

4. If cost analyses are to be included with the DEIR/DEIS, said analyses should incorporate mitigation costs into the final figure. By doing so, less environmentally damaging alternatives may transpire as being more fiscally competitive.

5. The cumulative impact section of the document should assess the overall effects of Highway 101 improvements on fish and wildlife resources.

In addition, CalTrans should be aware that a streambed alteration agreement pursuant to Fish and Game Code Section 1601 may be required prior to any work within the bed or banks of any stream affected by this project. This agreement process will be administered through our Region 3 Office in Yountville and can be initiated by contacting the Environmental Services section at the telephone number provided below. Notification should not be initiated until the CEQA/NEPA process has been completed and a Corps of Engineers permit has been obtained.

If you have any questions regarding our comments, please contact Mr. Rick Macedo, Fishery Biologist, at (707) 279-2904; or Mr. Carl Wilcox, Associate Wildlife Biologist, at (707) 944-5525.

Sincerely,

Brian Hunter

Brian Hunter
Regional Manager
Region 3

cc: Mr. Mike Long, U. S. Fish and Wildlife Service
National Marine Fisheries Service
Ms. Nancy Dubbs, Environmental Protection Agency

Appendix F Corps of Engineers Wetlands Delineation

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
333 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94105-2197

APR 0 6 1996

REPLY TO
ATTENTION OF:

Regulatory Branch

SUBJECT: File Number 19474N

Ms. Deborah Harmon
State of California
Department of Transportation
P.O. Box 3700
Eureka, California 95502

Dear Ms. Harmon:

Thank you for your submittal of revised maps dated February 12, 1996, requesting confirmation of the extent of Corps of Engineers jurisdiction for the California Department of Transportation Highway 101/Willits Bypass Project including the K-2 Alternative.

Enclosed is a map showing the extent and location of Corps of Engineers jurisdiction titled, "Willits Bypass Proposed Alignments, Mendocino, Willits, California" on eight sheets dated April 15, 1996.

We have based this jurisdictional delineation on the current conditions of the site. A change in those conditions may also change the extent of our jurisdiction. This jurisdictional delineation will expire in five years from the date of this letter. However, if there has been a change in circumstances which effects the extent of Corps jurisdiction, a revision may be done before that date.

All proposed discharges of dredged or fill material into waters of the United States must be authorized by the Corps of Engineers pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands.

If you propose work within our jurisdiction, a permit may be required. Application for Corps authorization should be made to this office using the application form in the enclosed pamphlet. To avoid delays it is essential that you enter the file number at the top of this letter into Item No. 1. The application must include plans showing the location, extent and character of the proposed activity, prepared in accordance with the requirements contained in this pamphlet. You should note, in planning your work, that upon receipt of a properly completed application and plans, it may be necessary to advertise the proposed work by issuing a public notice for a period of 30 days.

If an individual permit is required, it will be necessary for you to demonstrate to the Corps that your proposed fill is necessary because there are no practicable alternatives, as outlined in the U.S. Environmental Protection Agency's Section 404(b)(1) Guidelines. A copy is enclosed to aid you in preparation of this alternative analysis.

If you have any questions, please call Jane Hicks of our Regulatory Branch at (415) 977-8440. Please address correspondence to the District Engineer, Attention: Regulatory Branch, and refer to the file number at the head of this letter.

Sincerely,

Edward A. Vyhl

for Calvin C. Fong
Chief, Regulatory Branch

Enclosures

Appendix G NEPA/404 Memorandum of Understanding and Interagency Coordination

Appendix G contains the following concurrence letters:

Robert W. Floerke, Regional Manger California Department of Fish and Game, Central Coast Region	May 30, 2001
John Webb, Chief, Office of Environmental Services California Department of Transportation, North Region	April 6, 2001
Patrick J. Rutten U. S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Services	August 14, 2000
Rick Knapp, Director, District 1 California Department of Transportation – North Region	May 25, 1999
Patrick J. Rutten U. S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Services	May 14, 1999
Bruce G. Halstead U. S. Department of the Interior Fish and Wildlife Service, Arcata Fish and Wildlife Office	May 6, 1999
David Farrel, Chief, Federal Activities Office, U.S. Environmental Protection Agency, Region IX	April 27, 1999
Calvin C. Fong, Chief, Regulatory Branch, San Francisco Department of the Army, Corps of Engineers	April 19, 1999
Brian Hunter, Regional Manager Department of Fish and Game, Central Coast Region	April 14, 1999
David J. Farrel, Chief Office of Federal Activities United States Environmental Protection Agency, Region IX	April 13, 1995
Joel A. Medlin, Field Supervisor United States Department of Interior Fish and Wildlife Services, Sacramento Field Office	March 24, 1995
Calvin C. Fong, Chief, Regulatory Branch, San Francisco Department of the Army, Corps of Engineers	March 20, 1995
James R. Bybee, Environmental Coordinator United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Services	March 15, 1995

NEPA/404 Memorandum of Understanding and Interagency Coordination

In 1994, ACOE, USEPA, FHWA, USFWS, NMFS, and Caltrans signed a formal Memorandum of Understanding (MOU) that would integrate the NEPA process and Clean Water Act Section 404 procedures, as well as improve coordination among stakeholder agencies. The NEPA/404 Integration Process was designed to implement Section 404 more effectively in its efforts to preserve wetlands and the species of plants and animals that depend on this type of habitat.

Under the guidelines of the NEPA/404 Integration Process, signatory agencies are to agree to the project's Purpose and Need Statement, which sets forth the criteria for selecting project alternatives. The guidelines also specify that signatory agencies are to agree to the alternatives to be studied, early in the environmental review process.

Shortly after the Memorandum of Understanding for the NEPA/404 Integration Process was established, Caltrans and FHWA initiated the NEPA/404 Integration Process for this project with USEPA, ACOE, USFWS, and NMFS and invited these agencies to join the Project Development Team. In 1995, the participating agencies approved the alternatives that would be studied and the Purpose and Need Statement that would guide the project design and operation.

Ongoing discussions with these and other government agencies, including the City of Willits and Mendocino County, have revolved around the approved Purpose and Need Statement and the alternatives that were agreed upon as part of the NEPA/404 Integration Process. The agency concurrence letters follow.

In coordination with public circulation of the Draft EIR/EIS, ACOE issues a Section 404 public notice of the Draft EIR/EIS. FHWA and Caltrans evaluate the Draft EIR/EIS comments received, and ACOE evaluates comments received on the Section 404 public notice. Following comments received on the Draft EIR/EIS and the Section 404 public notice, Caltrans/FHWA, ACOE and USEPA are required to concur with the NEPA-preferred/Section 404 LEDPA, which will be documented in the Final EIR/EIS for final approval. Written agreement that the preferred alternative is the LEDPA will be required from ACOE and USEPA. Agreement that the project mitigation plan and implementation schedule is adequate will be required after circulation of the Draft EIR/EIS, as well.

After circulation of the Draft EIR/EIS and identification of the LEDPA, a preliminary agreement with USFWS on project mitigation will be required. A "Non-Jeopardy" Biological Opinion pursuant to the Endangered Species Act (federal) also will be required from USFWS at that time. After Final EIR/EIS approval, the document is circulated and ACOE issues a Section 404 public notice of the proposed Individual Permit.

The following documents will be included in the Final EIR/EIS as a preliminary agreement of Section 404(b)(1) compliance:

- Written USFWS preliminary agreement in the project mitigation plan as a result of earlier Fish and Wildlife Coordination Act consultation,
- Written USFWS/NMFS Non-Jeopardy documentation,
- Section 401 certification from State Water Quality Control Board, and
- Written ACOE and USEPA preliminary agreement on the following:
  - the final EIS NEPA preferred/Section 404 LEDPA,
  - that the project will not significantly degrade the aquatic environment, and
  - that the project mitigation plan and implementation schedule are adequate.

State of California

Business, Transportation and Housing Agency

Memorandum

To : RICK KNAPP
District 1 Director

JODY LONERGAN
Acting District 3 Director

Date: June 4, 2001

File: 01-MEN-101-T 70.0/82.6 (PMT43.5/51.3)
01-262000
Willits Bypass

From : **DEPARTMENT OF TRANSPORTATION**
LENA R. ASHLEY – Project Manager

Subject: PROJECT ACTION – TSM Alternative Elimination Concurrence

Your concurrence with the elimination of the TSM Alternative is reqtlested. The TSM Alternative has been fully studied and every technical study prepared to analyze impacts of the proposed project includes assessing impacts of the TSM Alternative. Community members with environmental concerns initially supported the TSM alternative. Changes were made to meet City of Willits concerns and Caltrans design standards. Due primarily to high cost and severe environmental impacts, there is no public support for the current TSM alternative.

During final preparation of the Draft EIR/EIS, members of the Willits Bypass study team and Caltrans Management considered but rejected the TSM alternative because it does not meet the project purpose and need. The TSM alternative would operate similar to a parallel arterial to existing Route 101 and would provide the least delay reduction of all the alternatives. In addition, the collision rate for the combination of the TSM Alternative and Main Street will not improve with construction of this alternative. The freeway study alternatives, however, are expected to provide a significant collision rate reduction, approximately 18% for the valley alternatives and 30% for Alternative E3, when combined with Main Street. Finally, the level of service provided by the TSM alternative is not consistent with the level of service provided by the freeway alternatives. In addition the TSM Alternative would result in a large number of residential and business relocations and adverse impacts to several eligible historic architectural properties. The alternative also has the potential to physically divide the community of Willits and conflicts with the City's goal to provide a "livable, walkable" community.

Thus members of Caltrans Management suggested the TSM alternative should be included in the Draft EIR/EIS as one of the alternatives considered, but eliminated from further study. On April 5, 2001, the attached letter was sent to our NEPA/404 and PDT representatives from US Environmental Protection Agency, US Army Corps of Engineers, National Marine Fisheries Service, US Fish and Wildlife Service, California Department of Fish and Game, and the Federal Highway Administration informing them of our decision to eliminate the TSM alternative from further analysis. In addition to the letter, the Project Manager phoned each of the resource agency PDT representatives to inform them of our decision and to offer to discuss concerns they may have. None of the five NEPA/404 resource agency representatives expressed concern over the elimination of the TSM alternative from further analysis.

Please sign below to show your concurrence with the decision to eliminate the TSM Alternative from further analysis.

Approval Recommended by:

LENA R. ASHLEY
Project Manager

Approved:

Rick Knapp

RICK KNAPP
District 1 Director

6/4/01
Date

Jody E. Lonergan

JODY E. LONERGAN
Acting District 3 Director

6/11/01
Date

LRA: lra c: 1-KAjise 2-CDaniels 3-NMacKenzie DMcElhaney
1-JCaputo 2-ABrandt 3-DRushton

Memorandum

To : Ms. Lena Ashley
Project Manager
California Department of Transportation
Post Office Box 3700
Eureka, CA 95502

Date: May 30, 2001

From : Robert W. Floerke, Regional Manager
Department of Fish and Game - Central Coast Region, Post Office Box 47, Yountville, California 94599

Subject: Willits Bypass Project Draft Conceptual Biological Mitigation Plan

Department of Fish and Game personnel have reviewed the Willits Bypass Draft Conceptual Biological Mitigation Plan and have visited the site with Caltrans personnel to review project impacts. It is our intention to alert Caltrans to a number of general biological mitigation criteria during early planning for this project. The following strategies should provide a baseline for determining mitigation costs and necessary time frames for adequate mitigation development. The Department will be anticipating this level of mitigation for permits (1601 and/or 2081 take permits) issued for this project.

Listed Plant Species:

Alternatives where take of State-listed plant species will result require a three-pronged approach to fully mitigate the impacts as required under Fish and Game Code Section 2081.

1. The Department will require the collection and the deposition in a certified long-term seed storage facility of seeds of the listed plants from the site to be destroyed. There is usually an endowment required by the facility to clean, count, process, and maintain the seeds. This is a one-time fee.

2. The Department will require a minimum 3:1 functional rare plant habitat preservation ratio. Generally on an acreage basis, three acres of existing rare plant habitat should be purchased and protected for every acre impacted. However, the functional quality of the habitat impacted and the habitat protected must be considered. If excellent quality

habitat will be destroyed and marginal quality habitat protected, higher mitigation ratios may be required. The protected land should be transferred to the Department in fee title ownership. In addition to the purchase and transfer of occupied habitat, the Department will require an adequate management endowment for the protected site. The amount of the endowment will be determined based upon site characteristics, surrounding land uses and the needs of the plant species protected. The endowment goes into a dedicated Department mitigation account and the interest generated is used for management (fencing, weed control, monitoring, etc.).

3. The Department will require a minimum 2:1 rare plant habitat creation ratio, measured on an acreage basis relative to the area impacted. The created habitat shall be functioning at least one year prior to impacting the listed plant species. After three years a minimum of at least 50 percent of the newly created rare plant habitat must support a viable population of the listed plant species. If less than 50 percent of the habitat supports the listed plant, additional acreage shall be developed and/or the initial site reevaluated and modified to achieve a 50 percent success rate.

Impacts to Salmonid Steams:

Several alternatives will directly fill portions of streams that bear salmon and/or steelhead. In order to reduce impacts to these sensitive species, the following mitigation strategy will be employed by the Department on any stream or portion of a stream that will be filled.

1. At a point above and to a point below the portion of the stream to be filled, a new channel shall be created with sufficient room to allow for a meandering channel and an extensive riparian gallery. Said channel shall be created at least two years prior to filling the existing channel and shall be planted with native riparian species appropriate to the valley. The new channel shall be designed to accommodate fish passage in both directions. One year prior to filling the existing channel, all water from the existing stream shall be diverted into the new channel and the new channel sampled to evaluate the effectiveness of the mitigation. Provided the new stream is functioning properly

and being used for passage by salmonids, the Streambed Alteration Permit for filling the old channel shall be issued. All vegetation planted along the new channel shall be maintained for a period of not less than three years. Annual monitoring reports shall be provided to the Department for review and concurrence.

2. On all salmonid bearing streams, the existing culverts under Highway 101 shall be upgraded to provide for fish passage with no impediment to upstream movement of adults nor downstream movement of juveniles.

The above measure is designed to reduce impacts to salmonid species. To mitigate for impacts to riparian habitat, amphibians, reptiles, and birds, the following measure will be required.

Caltrans shall work with private landowners to fence all existing streams within the project area.

In order to fully mitigate for possible take of listed salmonids, amphibians, and avian species, we recommend that the following be incorporated into project design.

Fully evaluate a creek with salmonids present (e.g., Haehl Creek) and rehabilitate its entire length within the project area. Examples of rehabilitation might include reducing sediment loading, enhancing riparian vegetation, removing movement barriers, restoring appropriate instream habitat, etc. A plan that incorporates appropriate enhancements would be approved by the Department and incorporated into the Bypass project as required mitigation.

Impacts to Wetlands:

Several of the alternatives will result in the loss of wetland acreage and wetland values. In order to comply with the Resources Agency policy of no net loss of wetland acreage or of wetland values, the Department will request a minimum 2:1 acreage replacement ratio. This ratio will apply to all high quality wetlands such as those in the Little Lake Valley area. All created wetlands will require maintenance and monitoring for a

minimum of five years. Sufficient funding shall be provided for this maintenance and monitoring over the five-year period and an endowment for annual maintenance and protection beyond the five-year period shall also be required.

Impacted disturbed wetlands, i.e., residential and/or hayfield wetlands, will require a 1:1 mitigation ratio provided the new wetlands are of high quality. Impacts to riparian areas are generally mitigated by creating an equal or greater length of stream with sufficient room for channel movement and riparian gallery.

Purchase and preservation of existing wetlands is generally not acceptable as mitigation for loss of wetlands. Such a strategy could result in a net loss of wetland acreage contrary to Resources Agency policy. However, a combination of preservation/enhancement and creation might provide a large sustainable wetland complex in perpetuity that would reduce overall impacts and have long-term benefits for fish and wildlife resources.

The above measures may not mitigate all impacts of the proposed Bypass but they do address our most significant concerns. Site specific impacts and mitigation measures can be dealt with during the environmental review process. We recommend that the above measures be incorporated as mitigation measures into project design and included in the environmental document for public and agency review.

We appreciate the opportunity to assist Caltrans in addressing these biological issues. If you have any questions regarding these comments, please contact Fred Botti, Environmental Specialist, at (707) 944-5571; or Scott Wilson, Habitat Conservation Supervisor, at (707) 944-5584.

STATE OF CALIFORNIA - BUSINESS, TRANSPORTATION AND HOUSING AGENCY

GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
NORTH REGION – OFFICE OF ENVIRONMENTAL PLANNING – MS19
2800 Gateway Oaks, STE 100
Sacramento, CA 95833
TDD Telephone (530) 741-4509
FAX (916) 274-6110
Telephone (916) 274-6851

April 6, 2001

U.S. National Marine Fisheries Service
Attn: Tom Daugherty
2550 North State Street
Ukiah CA 95482

RE: SELECTION OF ALTERNATIVES FOR ANALYSIS IN WILLITS BYPASS ENVIRONMENTAL DOCUMENT

Dear Mr. Daugherty:

Caltrans is preparing the Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the State Route 101 Willits Bypass Project. The purpose of this letter is to inform your agency that Caltrans proposes to eliminate the Transportation System Management (TSM) Alternative from further analysis in the Draft EIR/EIS. The Project Development Team has approved five build alternatives for analysis in the Draft EIS/EIR. Four of the alternatives are four lane freeways while the fifth, (TSM) is a combination of two and four lane highway with some access control. The TSM alternative runs through town on a combination of improved existing and new roadways. The No Build Alternative remains under consideration.

After further engineering and environmental investigations, Caltrans has determined the TSM Alternative no longer appears prudent or feasible. The Draft EIR/EIS will indicate that the TSM Alternative was considered but eliminated from further discussion for the reasons outlined below:

- The TSM Alternative does not attain the project purpose and need of reducing delay, or improving safety for interregional traffic.
- The Draft EIR/EIS will still consider all reasonable build alternatives, plus a no-build alternative.
- The TSM Alternative is the only alternative that results in unavoidable adverse impacts to six eligible historic architectural properties. The six properties include the Martin Baechtel house; the Samuel Baechtel house; a section of the Northwestern Pacific Railroad; a section of the California Western Railroad; a tee pee burner at 101 Redwood, Inc,; and block 3 of the Willits Historic District.
- The accident rate for the combination of the TSM Alternative and Main Street will not improve. The freeway alternatives, however, are expected to provide a significant accident rate reduction, approximately 18 % for the valley alternatives and 30% for Alternative E3, when combined with Main Street.
- There appears to be no public support for the TSM Alternative.

- The TSM alternative would result in the removal of 140 residential units, including 104 single-family homes, 15 multi-family units and 21 mobile homes. In addition, 28 commercial and industrial business would be relocated.

- The TSM alternative has the greatest impact on community housing stock. There is not sufficient housing in Willits for the large number of residents who would be displaced by the TSM alternative.

- The TSM Alternative would have direct impacts to those land uses in close proximity to the TSM alignment. Possible impacts could include increased noise, increased traffic volumes, reduction in parking supply and reduced access in the vicinity. These impacts would likely modify the existing character of the area.

- The TSM Alternative has the potential to physically divide the community of Willits.

- The TSM Alternative conflicts with the City's goal to provide a "livable, walkable" community.

As you are aware, the valley alternatives were modified to produce the truncated alternatives, C1T, J1T and LT. The E3 alternative has not changed. Therefore, four alternative alignments along with the No-Build Alternative will be described and evaluated in the Draft EIR/EIS. Figure 1 shows a map of the alternatives and project vicinity.

Caltrans is currently modifying the Administrative Draft EIR/EIS to eliminate the TSM alternative from further analysis. If you require additional information related to this correspondence, please contact me at (916) 274-5800 or Nancy MacKenzie, Associate Environmental Planner at (916) 274-5809.

Sincerely,

Chen Daniels for

JOHN D. WEBB
Chief, Office of Environmental Services

Enclosure

Cc: R.C. Solvensky, FHWA
Glen Clinton, FHWA
Fred Botti, CDFG
Carl Wilcox, CDFG
Pete Straub, USACOE
Mike Monroe, EPA
Randy Brown, USFWS
Ray Bosch, USFWS
Tom Daugherty, NMFS
John Webb, Caltrans
Lena Ashely, Caltrans
Andrew Brandt, Caltrans

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404

August 14, 2000 SWR3/TKD

Henry O. Bass, Chief
Office of Environmental Management
Department of Transportation
P.O. Box 911
Marysville, California 95901

Dear Mr. Bass,

Thank for the opportunity to review and comment on the Draft Conceptual Mitigation Plan (Plan) for the Willits Bypass, dated June 26, 2000. National Marine Fisheries Service (NMFS) has reviewed the document and has the following comments.

Section 2.1 Summary of Project Impacts should include impacts or disturbance to spawning and rearing habitat for salmonids. Figure 2.1 should reflect the correct listed species names. West coast chinook salmon should be California Coastal chinook salmon and West coast steelhead should be listed as threatened Northern California steelhead.

Section 2.2.2, must analyze impacts to juvenile salmonids and associated habitat that may be impacted by the construction and post construction activities. This section should also include the use of NMFS screen criteria for dewatering activities and coordination with NMFS fish passage engineers and biologists to minimize impacts of the proposed project on adult and juvenile salmonid lifestages.

Section 2.2.2 states that removal of large stretches of riparian vegetation would increase stream temperatures and affect fish migration. While it is true that stream temperatures will be affected, juvenile salmonid lifestage will likely be affected to a greater degree than migrating adult fish. Loss of large woody debris (LWD) must also be considered when analyzing the removal of riparian vegetation. Again NMFS would like to stress the importance of avoiding and minimizing impacts to riparian vegetation given the fact that LWD and mature riparian vegetation will take many years or decades to recover or restore.

Mitigation approaches (3.2) discussed in the Plan refer to Creation and Restoration, Enhancement and Preservation. With exception to the riparian community salmonid habitat is not mentioned in this section but is included later in the Plan. Preserving Mill and Outlet Creeks for the purpose of maintaining adult migration is included in the Plan and must be considered for other affected streams within the proposed project area. Creation of pools /riffles is discussed

with respect to the Upper Haehl Creek Mitigation Area section of the Plan. Salmonid rearing habitat is not discussed with respect to restoration efforts that may take place in Haehl Creek or other important stream reaches.

Monitoring and Performance Standards should reflect any fisheries surveys that may be conducted. Section 4.3.7 refers to coordination with the California Department of Fish and Game to develop monitoring mitigation areas. NMFS is responsible for the protection of federally listed fisheries resources and must be included in this effort.

If you have questions concerning these comments, please contact Mr. Thomas Daugherty at (707) 575-6069.

Sincerely,

Patrick J. Rutten
Supervisor, Northern California
Protected Resources Division

CC: Jim Lecky - NMFS, Long Beach, Ca.

State of California

Memorandum

Business, Transportation and Housing Agency

To: RICK KNAPP
District 1 Director

IRENE T. ITAMURA
District 3 Director

Date: May 25, 1999

File: 01-MEN-101-T70.0/82.6
(T43.551.3 PM)
01-262000
Willits Bypass

From: **DEPARTMENT OF TRANSPORTATION-North Region**
LENA R. ASHLEY – Project Manager

Subject: ALTERNATIVES K and K2 ELIMINATION CONCURRENCE

Your concurrence with the elimination of Alternatives K and K2 from further study is requested.

The Willits Bypass study team has prepared an issue paper identifying environmental problems with these alternatives and a design evaluation describing constructability reasons for their elimination.

At the January 21,1999 Project Development Team (PDT) meeting, we indicated we would meet with our resource agency partners to determine if they would consider dropping these alternatives. In early April, the project study team met with representatives from US Environmental Protection Agency, Army Corps of Engineers, National Marine Fisheries Service, and the CA Department of Fish and Game and briefed them on the status of these alternatives including their cost, environmental impacts and engineering feasibility. (The US Fish and Wildlife representative was not able to attend the meeting.) At the meeting, we requested each agency concur with our request.

Elimination of the two eastern alternatives was proposed to the Willits Bypass Technical Advisory Group on April 21, 1999, and received unanimous support. Both City representatives and members of the local environmental community expressed support for the elimination of Alternatives K and K2. The Project Development Team was presented with the proposal on April 22, 1999. During discussion of the proposal to eliminate Alternatives K and K2, the US Fish and Wildlife Service PDT representative requested we examine the remaining alternatives using a "nodal" approach. The nodal approach involves dividing alternatives into parts and evaluating the environmental impacts of each part or node. The advantage of this approach is it allows the alternatives to be considered separately or allows combinations of alternatives to be considered. The TSM alternative will be unaffected.

Over the last several weeks, we received concurrence letters from all of our resource agency partners. I have attached them for your review. Finally, we reviewed this process with Federal Highway Administration representatives and they endorse our effort to amend the initial 1992 NEPA/Section 404 Memorandum of Understanding integration process.

Approval Recommended By:

LENA R. ASHLEY
Project Manager

Approved:

RICK KNAPP
District 1 Director

5/26/99
Date

IRENE T. ITAMURA
District 3 Director

6/1/99
Date

Attachment

c: 1-JLonergan
2-HBass
3-DCastrillo
1-DMelim
2-ABrandt
3-DRushton
SKirkpatrick
Project Development Team Members
Technical Advisory Group Members

LRA/lra

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404

CALTRANS

1999 MAY 19 PM 1:45

May 14, 1999 F/SWR3:TKD

Department of Transportation
1656 Union Street
Eureka, CA 95501
Attn: Lena Ashley, Project Management

Dear Ms. Ashley:

In response to your request for formal concurrence pursuant to the NEPA/404 Memorandum of Understanding on Integration of the National Environmental Policy Act and the Clean Water Act Section 404 Procedures for Surface Transportation Projects, the National Marine Fisheries Service (NMFS) submits the following:

NMFS has reviewed the information provided by Caltrans supporting elimination of Alternatives K and K2, and others, and concurs with the elimination of these alternatives. In addition, NMFS concurs with the modified range of alternatives to be addressed in the Willits Bypass Draft Environmental Document.

If you have questions concerning these comments, please contact Mr. Thomas Daugherty at (707) 575-6069.

Sincerely,

Patrick J. Rutten
Supervisor, Northern California
Protected Resources Division

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Arcata Fish and Wildlife Office
1125 16th Street, Room 209
Arcata, California 95521
(707) 822-7201 FAX: (707) 822-8136

CALTRANS
1999 MAY -6 AM 10

In Reply Refer To:
1-14-1998-95

Ms. Lena Ashley
Project Manager
California Department of Transportation
1656 Union Street, PO Box 3700
Eureka, CA 95502-3700

Subject: Concurrence with proposal to eliminate Alternatives K and K2 from further consideration in the Willits Bypass EIR/EIS.

Dear Ms. Ashley:

On April 22, 1999 Ray Bosch of the U.S. Fish and Wildlife Service's (Service) Arcata office attended a meeting of the project development team for the Willits Bypass project. The primary purpose of that meeting was to discuss the proposed elimination of two route alternatives from the project, Alternatives K and K2. Previous discussions of this proposal had occurred at an interagency meeting in San Francisco on April 8, 1999, which we were unfortunately unable to attend. However, you transmitted to us information presented at that meeting, and summary documents prepared following that meeting.

During the April 22 meeting, a great deal of discussion occurred regarding the reasons for eliminating Alternatives K and K2 from further analysis. Your agency prepared substantial documentation as to the anticipated environmental, social and economic impacts likely to occur from implementation of either these two alternative routes. Of special significance are the excess fill material generated from either of these two alternatives (especially Alternative K), and the severe impacts to sensitive plant species and wildlife habitats.

Concerns were raised during the discussion that elimination of Alternatives K and K2 could preclude some options under consideration in project planning. Specifically, a concern was raised that since Alternative E3 is projected to be substantially above the allocated budget for the project (which is also true of some other alternatives as well), there would effectively be no practicable "wetlands avoidance" alternative remaining in the project's environmental review stage. This could result in undue pressure to adopt one of the alternatives that significantly impacts wetlands, to the detriment of fish and wildlife resources dependent upon wetland habitats.

To address these concerns, it was suggested that Caltrans adopt an approach to the environmental analysis that would allow an environmental review of the six other alternatives (C1, E3, J1, L, TSM, and

No Build) using a "nodal approach". That is, each of the build alternatives would be analyzed in segments, and environmental impacts reported for each segment, as possible, so that a preferred alternative/proposed action can be developed for the final EIR/EIS from the results of this segmented analysis. This approach would facilitate the development of a preferred alternative that is the least environmentally damaging and practicable, yet consistent with the overall purpose and need of the project. This approach would also be consistent with NEPA requirements for full disclosure of expected environmental impacts. It was further suggested that the selection of analysis segments be drafted by Caltrans, and reviewed by the project development team.

On April 29, 1999, Caltrans sent a letter to this office in which it formalized this agreement to conduct a segmented analysis of the build alternatives in the draft EIR/EIS . The Service concludes, based upon the information that you have shared with us, that alternatives K and K2 are likely to have severe environmental impacts which would be very difficult to mitigate, and have significant engineering and geotechnical problems that make these alternatives infeasible. The Service therefore concurs with your proposal to eliminate Alternatives K and K2 from further detailed analysis in the Willits Bypass draft EIR/EIS, contingent upon the agreed to nodal analysis of the remaining build alternatives (C1, E3, J1, L and TSM). This approach will still meet the needs for a full range of practicable alternatives to be considered in the environmental document, and provide for a thorough analysis of each segment of potential highway routing. This more flexible approach will provide a means whereby a hybrid preferred alternative can be developed for the Final EIR/EIS as the NEPA/Section 404 least environmentally damaging practicable alternative.

The Service thanks you for your efforts to minimize adverse effects to fish and wildlife resources. We look forward to continued participation with Caltrans in the design and analysis of the Willits Bypass project.

Any questions regarding this matter may be directed to Ray Bosch of our staff, (707) 822-7201.

Sincerely,

Bruce G. Halstead
Project Leader

cc: CDFG, ATTN: J. Wakeman, Yountville
NMFS, ATTN: T. Daugherty, Santa Rosa
USACE, ATTN: P. Straub, San Francisco
EPA, ATTN: M. Monroe, San Francisco
FHWA, ATTN: D. Harris, San Francisco

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

CALTRANS
1999 APR 30 PM 1:07

April 27, 1999

Ms. Lena Ashley
Project Manager
California Department of Transportation
1656 Union Street
Eureka, CA 95501

Subject: Willits Bypass Project, Mendocino County, California. NEPA/404 Coordination.

Dear Ms. Ashley:

On April 13, 1995, we provided a letter to your agency regarding the proposed Willits Bypass Project. In that letter, which was written in accordance with the NEPA/404 Memorandum of Understanding, we concurred with several Project elements. These included the: 1) project purpose and need, 2) range of alternatives to be considered under NEPA, 3) range of alternatives to be considered under Section 404 of the Clean Water Act, and 4) criteria for considering these alternatives.

On April 8 and 22, 1999, Michael Monroe of EPA's Wetlands and Sediment Management Section met with you, other Caltrans staff, and representatives of other resource agencies to discuss the proposed Project. The purpose of these discussions was to consider eliminating Alternatives K and K2 from further analysis. Based on the written and verbal information that you provided at these meetings, and in response to your April 9 letter to Mr. Monroe, we hereby concur that it is appropriate to eliminate Alternatives K and K2. We believe the remaining six alternatives — C1, E3, J1, L, TSM, and No Build — should be carried forward and analyzed fully in the Draft EIS.

As discussed, we encourage you to divide each of the remaining alternative alignments into several segments (the "nodal approach") so that one can better analyze the environmental impacts associated with each segment. This analysis may prove to be useful in developing a hybrid alternative that is presented in the Final EIS as the NEPA preferred/Section 404 least environmentally damaging practicable alternative.

We look forward to working with Caltrans and the other agencies throughout the development process for this project. If you have questions regarding these comments or need more information regarding the NEPA/404 integration process, please contact Mr. David Tomsovic at (415) 744-1575. If you have questions regarding the Section 404 aspects of the Project, please contact Mr. Michael Monroe at (415) 744-1963.

Sincerely,

FOR

David Farrel, Chief
Federal Activities Office

cc: CDFG, J. Wakeman, Yountville
FHWA, D. Harris, San Francisco
NMFS, T. Daugherty, Santa Rosa
USACE, P. Straub, San Francisco
USFWS, R. Boesch, Arcata

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
333 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94105-2197

REPLY TO
ATTENTION OF:
Regulatory Branch

APR 19 1999

SUBJECT: File No. 19474N

Ms. Lena R. Ashley
California Department of Transportation
District 1
P.O. Box 3700
Eureka, California 95502-3700

Dear Ms. Ashley:

This is in reply to your letters of April 2 and 9, 1999, which seek concurrence from the U.S. Army Corps of Engineers to eliminate Alternatives K and K2 from the Willits Bypass Study, pursuant to the NEPA/Section 404 Memorandum of Understanding for Surface Transportation Projects in California.

The Corps has reviewed the information provided by your agency and concurs that further analyses of Alternatives K and K2 are not warranted in light of the practicability of the remaining alternatives to be addressed in the Willits Bypass Environmental Document. Alternatives K and K2 would generate excess fill material for which no disposal site reasonably exists, could not be staged to spread construction costs over several funding cycles, and would degrade relatively pristine wildlife habitat prevalent along the eastern side of Little Lake Valley.

You may refer any questions on this matter to Mr. Peter Straub of my staff at telephone 415-977-8443. All correspondence should be addressed to the Regulatory Branch, North Section, referencing the file number at the head of this letter.

Sincerely,

Calvin C. Fong
Chief, Regulatory Branch

State of California

The Resources Ag[illegible]

Memorandum

CALTRANS

1999 APR 16 PM 1:38

To : Ms. Lena Ashley, Project Management
CalTrans
1656 Union Street
Eureka, California 95501

Date: April 14, 1999

From : Department of Fish and Game - Post Office Box 47, Yountville, California 94599

Subject: Willits Bypass Draft Environmental Impact Report

In response to your request for formal concurrence pursuant to the NEPA/404 Memorandum of Understanding on Integration of the National Environmental Policy Act and Clean Water Act Section 404 Procedures for Surface Transportation Projects, the Department of Fish and Game submits the following:

The Department has reviewed the information provided by Caltrans supporting elimination of Alternatives K and K2 and concurs with the elimination of these alternatives, and the modified range of alternatives to be addressed in the Willits Bypass Draft Environmental document.

If you have any questions, please contact John Waithman, Environmental Specialist, (707) 944-55[illegible], or Carl Wilcox, Environmental Services Supervisor, (707) 944-5525.

[illegible]
Central Coast Region

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CALTRANS REGION IX
75 Hawthorne Street
'95 APR San Francisco, CA 94105-3901

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R/W APPR
DDO-PLNG/PROG
ENV PLNG
PROG MGMT
TRANS PLNG
ICE
GEN FILES

April 13, 1995

Deborah L. Harmon, Chief
Environmental Management Office
P.O. Box 3700
District 1
California Department of Transportation
Eureka, CA 95502

Dear Ms. Harmon:

The Environmental Protection Agency has reviewed the information concerning the proposed Route 101 Willits Bypass received in our office on February 27, 1995. Based upon the information provided, our involvement in the concurrent process is appropriate in accordance with the NEPA/404 Memorandum of Understanding (MOU), particularly since there are projected wetlands impacts identified in the documents.

We are pleased to offer our initial concurrence on several elements of the project. We concur that: 1) the purpose and need for the project is adequately defined; 2) the project document discusses a range of alternatives pursuant to NEPA and the Guidelines for implementing Clean Water Act (CWA), Section 404; 3) the range of alternatives presented appears to meet the requirements of Section 404; and 4) the project document has adequately included the criteria for considering the alternatives presented. However, there are several other elements that we believe warrant further refinement before proceeding to the next stage in the NEPA/404 process. We've listed the applicable elements from the MOU below and provided comments which relate to each element.

1. Does the information provided identify the (Section 404) least environmentally damaging practicable alternative and is it described as such? Of the 6 alternatives that are suggested to be carried through to the Environmental Document there are three that are described as wetland avoidance alternatives, including the TSM alternative. Identifying the least environmentally damaging alternative is a major issue that should be addressed in the next stage of the NEPA/404 documentation process.

In reviewing the information provided, we also note that there is a request for concurrence for Caltrans to drop the TSM alternative. We suggest retaining the TSM alternative in the list of alternatives. If there is a decision to drop the TSM

alternative from further consideration, due to the fact that the TSM alternative does not meet the scope of the purpose and need statement, provide detailed reasons for dropping the TSM alternative from consideration in future environmental documents. Please refer to the Alternatives Analysis Section of Appendix A of the MOU, for further guidance on discussing the criteria for alternative selection.

2. Does the project mitigation plan and implementation schedule adequately accommodate the intent of the NEPA/404 Concurrent Process?

3. Once implemented, would the proposed mitigation plan prevent significant degradation of the aquatic environment from the project? Both of these issues should be addressed in the next stage of project development and considered thoroughly in the next round of NEPA/404 concurrent process documentation. Please refer to the Compensatory Mitigation Section of the NEPA/404 MOU guidance papers.

We appreciate your efforts in providing information in keeping with the NEPA/404 MOU. Should you have any questions regarding our comments, please contact me at (415) 744-1584 or David Carlson of my staff at (415) 744-1577. If you have any questions regarding Section 404 issues, you may contact Mike Monroe in our Wetlands and Sediment Management section at (415) 744-1963.

Sincerely,

Carolyn Yale (for DF)

David J. Farrel, Chief
Office of Federal Activities

cc: FHWA (D. Harris)

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Sacramento Field Office
2800 Cottage Way, Room E-1803
Sacramento, California 95825-1846

In Reply Refer To:
PPN 1529

March 24, 1995

Deborah L. Harmon
Chief Environmental Management Office
State of California Department of Transportation
District 1
P.O. Box 3700
Eureka, California 95502-3700

Subject: Willits Bypass, NEPA/404 Integration, Davis Creek, City of Willits, Mendocino County, California

Dear Ms. Harmon,

This letter is in response to a Caltrans request for the U.S. Fish and Wildlife Service's (Service) concurrence on the purpose and need statement, modal choice analysis and the list of alternatives which will be analyzed in the draft Environmental Impact Statement (DEIS). Our response is made pursuant to the 1994 Memorandum of Understanding on Integration of the National Environmental Policy Act and Clean Water Act Section 404 Procedures for Surface Transportation Projects and is not intended to take the place of any formal comments that may be required under the Fish and Wildlife Coordination Act or the Endangered Species Act of 1973 as amended.

The Service has reviewed information provided by Caltrans on February 21, 1995, and concurs with the purpose and need statements for the Willits Bypass Project. The Service agrees with Caltrans that the roadway improvement modal choice is the most feasible and practical method of reducing traffic volumes within the community of Willits. The Service also concurs with the range of alternatives which have been selected for continued analysis in the DEIS.

If you have any questions concerning this project, please contact Mark Littlefield (Wetlands Branch) at (916) 979-2113.

Sincerely,

for Joel A. Medlin
Field Supervisor

cc: Reg. Dir., (ARD-ES), Portland, OR
Coastal California Fishery Resource Office
Attention: Bruce Halstead
EPA, San Francisco

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS
333 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94105-2197

REPLY TO
ATTENTION OF:
Regulatory Branch

APR 19 1999

SUBJECT: File No. 19474N

Ms. Lena R. Ashley
California Department of Transportation
District 1
P.O. Box 3700
Eureka, California 95502-3700

Dear Ms. Ashley:

This is in reply to your letters of April 2 and 9, 1999, which seek concurrence from the U.S. Army Corps of Engineers to eliminate Alternatives K and K2 from the Willits Bypass Study, pursuant to the NEPA/Section 404 Memorandum of Understanding for Surface Transportation Projects in California.

The Corps has reviewed the information provided by your agency and concurs that further analyses of Alternatives K and K2 are not warranted in light of the practicability of the remaining alternatives to be addressed in the Willits Bypass Environmental Document. Alternatives K and K2 would generate excess fill material for which no disposal site reasonably exists, could not be staged to spread construction costs over several funding cycles, and would degrade relatively pristine wildlife habitat prevalent along the eastern side of Little Lake Valley.

You may refer any questions on this matter to Mr. Peter Straub of my staff at telephone 415-977-8443. All correspondence should be addressed to the Regulatory Branch, North Section, referencing the file number at the head of this letter.

Sincerely,

Calvin C. Fong
Chief, Regulatory Branch

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region, RCD
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404

March 15, 1995 F/SW02

Deborah L. Harmon
Chief, Environmental Management Office
Department of Transportation
District 1, P.O. Box 3700
Eureka, California 95502-3700

Dear Ms. Harmon:

Pursuant to the NEPA/Clean Water Act Integration Progress Memorandum of Understanding, I have reviewed and concur with the Purpose and Need statement, the modal choice analysis, and the range of alternatives that will be considered, as well as those that have been dropped, for the Willits Bypass Draft Environmental Impact Statement.

If you have questions concerning these comments or wish to discuss the project further, please contact Mr. David Mattens at: 777 Sonoma Avenue, Room 325, Santa Rosa, California 95404; telephone (707) 578-7513.

Sincerely,

James R. Bybee
Environmental Coordinator
Northern California

cc: C. Morris, EPA
J. Medlin, FWS

WILLITS BYPASS

Purpose of the Project

The purpose of the project is to reduce delays, improve safety and achieve a level of service (LOS) of at least "C" for interregional traffic on Route 101 within the project limits in the vicinity of the City of Willits in Mendocino County. (A definition of the various levels of service can be found in the adjoining box on this page.) This project is proposed due to a recognition that increased congestion, delay and accidents will occur as traffic volumes increase over time as a result of local development and increased interregional traffic volumes, if the project is not built.

Need for the Project

1. Improve Level of Service for Interregional Traffic

Route 101 is a principal arterial route and has been recommended by the State and the Federal Highway Administration to be included in the National Highway System, one of only six routes on the North Coast with such a designation.

Recognizing the importance of Route 101 for the interregional movement of people and goods, Caltrans has established a concept level of service (LOS) of "C" for the route in the Route Concept Report. The Regional Transportation Plan adopted by the Mendocino Council of Governments (MCOG) recommends that new facilities provide a level of service of at least "C" through the year 2010. In addition, the MCOG considers the Willits Bypass project to be its number one priority project, as does the North Coastal County Supervisor's Association. For the traffic volumes that exist and are projected for Route 101, a "C" level of service can only be achieved by construction of a four-lane highway. A two-lane facility would not provide better than an "E" level of service in the short term, and could not begin to adequately accommodate future traffic growth which is expected to increase by approximately 60% over the next 20 years.

Signalized intersections, parking maneuvers, pedestrians, turning movements, and speed limits reduce peak hour speeds to less than 15 kilometers per hour (10 mph) between the north Willits city limit and the Route 20/101 intersection; queues and a level of service "F" has been observed within the project limits north of the city limit. At times Caltrans Maintenance forces have been required to warn traffic that they are approaching a queue to avoid accidents.

Reaches of the highway located within the city limits are classified as urban arterial. Urban arterials have level of service definitions that differ from those of rural highways. If these reaches of highway were elavuated using rural highway criteria, their level of service would be "F". This situation falls far short of the target level of service "C" articulated in the Route Concept Report at completion of construction. Conditions in twenty years, with the projected increase in traffic volumes, would be even worse.

LOS "A": Complete unimpeded ability to maneuver vehicle, high level of physical and psychological comfort.

LOS "B": Stable traffic flow, other motorists in traffic stream noticeable, little restriction to vehicle maneuverability.

LOS "C": Stable flow but small traffic increases causes noticeable deterioration in service, freedom to maneuver restricted and lane changes require additional care and driver vigilance.

LOS "D": Traffic flow borders on unstable, small increases in flow causes substantial service deterioration, maneuvering and lane changes are severely limited.

LOS "E": Unstable operations with no usable gaps in the traffic stream, vehicles spaced at roughly four car lengths, very poor physical and psychological comfort.

LOS "F": Forced or breakdowns of traffic flow, recurring points of congestion, peak hour flow rates are at highway capacity.

SOURCE: Highway Capacity Manual (Transportation Research Board, Special Report #209, 1985)

Level of Service Descriptions

Route 101 is the major north/south route connecting southern and central California with the communities along California's north coast and Oregon's southern and central coasts. Travel times and the costs of transporting goods to and from the communities along Route 101 are high. Travel times and transportation costs are exacerbated by congestion-related delays at Willits and other locations where Route 101 passes through developed areas on surface streets.

When traffic volumes were lower, many more communities north of San Francisco had Route 101 passing through the middle of town on surface streets. Over time, most of those communities such as Novato, San Rafael, Petaluma, Santa Rosa, Cloverdale, Ukiah, Garberville, Rio Dell, Fortuna, Arcata, and McKinleyville have been bypassed or had controlled access highways or freeways built through the community. Willits is the only city between San Francisco and Eureka a distance of 435 kilometers (270 miles), which continues to have Route 101 traversing the city on surface streets.

The Caltrans Route Concept Report (RCR) for Route 101, north from San Francisco to the Oregon border calls for the ultimate construction of a four-lane freeway or expressway[1] to minimize congestion, delays and to improve traffic safety. This would result in the bypass of several additional communities such as Hopland, Laytonville, Eureka and Crescent City. Individually, delays at locations that have already been bypassed probably would be measured in fractions of hours had the bypasses not been built; however, measured cumulatively in conjunction with all the other congested developed areas, the delays would be significant and measured in hours, particularly during peak traffic periods.

As previously indicated, interregional traffic on Route 101 through Willits experiences congestion and delays due to signals, pedestrian and motorist cross-traffic and turning movements. In off-peak periods, delays result from reduced speed limits within the urban limits, a distance of 4.3 kilometers (2.6 miles). During peak periods, the conflicting movements listed above, in conjunction with high traffic volumes, cause significant delays and queuing, and result in average speeds under 15 kilometers per hour (10 mph) for southbound traffic approaching the Route 101/20 intersection. Queues extending approximately 3.2 kilometers (2 miles) north of the city limit has been observed.

The following table (Table 1) contrasts travel times during the year 1993 with projected times for the construction year (2001) and a planning year 20 years after construction (2021) and with projected travel times on freeway alternatives. The table also projects travel times on existing Route 101 if the TSM alternative were constructed.

The travel time projections are based on growth projections prepared by Caltrans. Traffic volumes are expected to increase 60% by 2012, 20 years beyond the base year (1992); traffic is expected to increase 84% over the base year at 20 years after construction, (2021). (Traffic volumes in the base year ranged from 8,500 to 16,000 Average Daily Traffic (ADT) on Route 101 in Willits. Volumes are projected to range from 16,000 to 38,000 ADT in 2021 if no project is constructed.)

TABLE 1
Travel Time Through Willits (PM 42.54/52.17)

ALTERNATIVE	1993 TRAVEL TIME OFF PEAK HOUR* (MINUTES)	1993 PEAK HOUR (MINUTES)	2001 CONST. YEAR X OFF PEAK HOUR (MINUTES)	2001 CONST YEAR PEAK HOUR (MINUTES)	2021 20 YEARS AFTER CONSTRUCTION PEAK HOUR (MINUTES)
No Project	12	15	13	16	41
Route 101 with TSM Route Operational	N/A	N/A	13	15	25
Freeway Alternative (Range)	N/A	N/A	10-11	10-11	10-11

* Off peak hour represents traffic volumes for an average daylight hour. These delay estimates are conservative since they are not based on a model that would quantify the extent to which the system would break down as lengthening queues at one intersection backup and exacerbate delays at the preceding intersection. These figures also represent an average of travel time for northbound and southbound traffic. Peak traffic volumes are typically much worse in one direction than the other, so delays in one direction are greater than those shown in this table.

[1] The RCR has currently been revised to a lower concept for two segments between Eureka and Crescent City reflecting constraints imposed by the adjacency of State and National park lands and the presence of protected species. The concept LOS for Route 101 at Willits was changed during that revision from "B" to "C". Under no circumstances will the projected LOS for Willits be acceptable.

These delays are significant both when viewing Willits in isolation, and when the delays and congestion are considered cumulatively as congestion worsens at each of the communities along Route 101 that have not been bypassed. It is important to note that, although this discussion analyzes delays at 20 years after construction, the proposed facility will accommodate growth for many years beyond that time.

2. Safety

The current facility consists of a number of differing widths and lane configurations and numerous at-grade intersections. Starting at the southerly project limits, the existing facility is two-lane conventional highway until, at the southerly city limits, it transitions to four lanes; then to three-lanes as it approaches the intersection of Route 20; finally it reverts to a two-lane undivided conventional highway at the northerly city limits and continues for 8.36 kilometers (5.2 miles) to the northerly study limits at Oil Well Hill (Post Mile 52.17). Non-standard widths, lack of traffic separation, congestion and numerous conflicting traffic movements due to turns and cross-traffic contribute to an accident rate that approximates the statewide average of 1.55 accidents per million vehicle kilometers (621,388 miles) traveled for similar facilities. The statewide average for a rural four-lane freeway is 0.22 accidents per million vehicle kilometers (621,388 miles) traveled. Over the past three years there have been 242 accidents on Route 101 within the project limits; 8 fatalities and 157 injuries resulted from those accidents.[2] This number of accidents is more than 7 times higher than what would be expected on a rural four-lane freeway. The number of fatalities and injuries are 2.6 times higher and more than 9 times higher on the existing facility than is expected on a rural four-lane freeway.

3. Interregional Auto and Truck Traffic Interference with Local Travel

Approximately 4,000 vehicles with interregional origins and destinations travel daily on the only continuous north/south city street in the City of Willits, Route 101. Of the 4,000 vehicles, approximately 1,000 are trucks, many of which are large, noisy five-axle trucks commonly used for long haul goods transport. Local residents must adjust to significant congestion and inconvenience due to interregional traffic using the same streets local residents must use for routine trips to work places, shops, and schools. Removal of interregional traffic from Main Street would reduce this congestion.

The use of Main Street/Route 101 by interregional commercial vehicles results in a high number of vehicles carrying hazardous materials traveling through the City near businesses, high density residential areas and schools. This is of particular concern because of the number of accidents that are expected on a facility passing through a city with a large number of at-grade intersections. A new freeway or controlled-access facility located in a less densely populated area would have a lower level of risk for accidents related to the spill and dispersal of hazardous materials.

4. Noise and Vibration

The interregional auto and truck traffic described above generates substantial noise and vibration impacts along existing Route 101 in Willits. By removing a significant percentage of interregional traffic from the more densely developed areas, a bypass would reduce the amount of noise and vibration experienced by nearby homes, businesses, schools and other community facilities. Obviously, these proximity impacts will occur wherever the highway facility is located; where feasible, though, they should be removed from densely developed community centers.

5. Conditions for Bicyclists and Pedestrians

Substantial numbers of autos and large trucks with interregional origins and destinations add to the traffic volumes in the City of Willits. The removal of interregional traffic, including trucks and

[2]Caltrans accident data is based on reported accidents. Our analysis indicates that 100% of fatal accidents, 90% of injury accidents, and 40% of property damage accidents are reported.

autos, from Willits' main street will improve conditions for both bicyclists and pedestrians. Narrow shoulders, wide roadways and infrequent crosswalks make traveling along or crossing Route 101 difficult. In particular, these deficiencies make access within Willits difficult for less mobile groups such as the young, disabled, and elderly.

TAA:lr

Appendix H NEPA/404 Alternatives Analysis

1 Introduction

The California Department of Transportation (Caltrans) with aid from the Federal Highway Administration (FHWA) is proposing a highway bypass around the City of Willits in Mendocino County. The project is being proposed to address operational problems due to the current facility being used as both an interregional through route and a local main street in Willits. Several alternatives have been considered for the project, including five alternatives that are examined in the Draft EIR/EIS. Four of the alternatives, C1T, E3, J1T, and LT, would involve the construction of a four-lane freeway (freeway alternatives). The fifth alternative, is the No Build alternative, which is an alternative in which no new freeway or highway construction would take place.

In addition, the project would require the placement of from 2.4 million cubic yards to 3.1 million cubic yards of fill material for construction of Alternatives C1T, J1T or LT. One proposed optional "borrow" site (referred to as the "designated borrow site") for the excavation of this fill material would be located at Oil Well Hill at the northern terminus of the project. Excavation activities would affect between 12 ha and 16 ha (30 ac to 40 ac) of the designated borrow site, and would occur along a 1,300 m (4,250 ft) section of Caltrans right-of-way (ROW) along Highway 101 north of Outlet Creek.

Each of the proposed build alternatives would require a U.S. Army Corps of Engineers (ACOE) Section 404 individual permit under the Clean Water Act for discharging or placing fill material into waters of the United States (U.S.). Impacts to waters of the U.S., including wetlands, by the proposed project range from 6.1 ha (15.1 ac) for Alternative E3 to 52.2 ha (129.1 ac) for Alternative C1T.

This Section 404(b)(1) Alternatives Analysis is a specific evaluation to determine the least environmentally damaging practicable alternative (LEDPA) to wetlands and other waters of the U.S., while meeting the project's purpose. Because selection of any of the proposed build alternatives as the preferred alternative would require an ACOE Section 404 Individual Permit, an analysis of impacts to aquatic resources and associated sensitive species for each alternative is required to comply with the Section 404 (b)(1) Guidelines. The U.S. Environmental Protection Agency (USEPA)(40 CFR Part 230, December 24, 1980) published these Guidelines to ensure that where projects would adversely affect aquatic resources that no other alternative exists that

avoids or would have less adverse effects to those resources. Based on these Guidelines, project sponsors must evaluate all practicable alternatives that avoid or would have less adverse impacts to aquatic resources.

This report provides an analysis of alternatives that is based on the proposed alternatives and identifies a LEDPA (least environmentally damaging practicable alternative). This analysis will be circulated concurrently with the Draft EIR/EIS, which is required for compliance with the National Environmental Policy Act (NEPA). Following receipt of comments on the Draft EIR/EIS, Caltrans/FHWA, ACOE and the USEPA are required to agree to the NEPA preferred/ Section 404 LEDPA, which will be documented in the Final EIR/EIS for final approval.

2 Proposed Action

2.1 Project Description

The project area is located in and adjacent to Willits in Mendocino County. The project is being proposed to reduce delays, improve safety and achieve a level of service (LOS) of at least "C." To address operational problems caused by the facility's use as both an interregional through route and the main street of Willits, the project proposes construction of a new segment of U.S. 101 that would bypass Willits.

Many bypass alternatives were considered during the project's history. The earliest alternative, referred to as Alternative A, was formally adopted by the California Transportation Commission (CTC) in 1962, prior to federal and state environmental laws. Alternative A involved building a new freeway segment across the Little Lake Valley and would have consisted of a straight-line route that was the shortest possible route between the beginning and ending points for the bypass. This alternative was dropped in 1994 because of its unacceptable environmental impacts. Since 1962, approximately 30 alternatives have been considered as a result of public and governmental agency input and independent investigation by Caltrans staff. Chapter 2 (Purpose and Need for Project) of the Draft EIR/EIS provides a history and chronology of the project's concept.

The Willits Bypass project was funded in the 1992 State Transportation Improvement Plan (STIP) and later supplemented and programmed in the 2002 STIP for $116

million by the CTC. The Mendocino Council of Governments (MCOG) included its entire $17.3 million share of Regional Improvement Program funds to show strong local support for the project.

Alternatives C1T, J1T and LT were formerly referred to as C1, J1 and L, before they were shortened recently, and are referred to as the Truncated Alternatives. Prior to being shortened, Alternatives C1, J1 and L ended at Oil Well Hill. During the Spring of 2001, the PDT agreed to study the shortened alternatives for the purpose of reducing costs, while meeting the project's purpose and need. A truncated Alternative E3 was not considered because its location as a western bypass alternative and the geography along its alignment do not lend themselves to shortening or combining with other truncated valley alternatives.

The revised alternatives and Alternative E3 would result in the construction of a four-lane freeway. Alternatives C1T, J1T and LT would cross Little Lake Valley east of the City of Willits, and Alternative E3 would traverse the hills west of Willits.

In addition, a No-Build Alternative is being considered. Under the No-Build Alternative, no changes would occur, and vehicles would continue to use the existing U.S. 101.

2.2 Purpose Of Project

Recognizing the importance of U.S. 101 for the interregional movement of people and commercial products, the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA) propose to construct a new segment of U.S. 101 that would bypass Willits. Caltrans and FHWA propose this bypass project to reduce delays, improve safety and achieve a level of service (LOS) of at least "C" for interregional traffic within the project limits.

2.3 Need For Project

U.S. 101 is an important route for interstate and interregional travel and is considered the economic lifeline of California's North Coast. It is the main route for people and commercial products between the San Francisco Bay Area and the greater Eureka-Arcata area. Travel times and the costs of transporting products to and from the

communities along U.S. 101 are high. Travel times and transportation costs are exacerbated by congestion-related delays at Willits, where U.S. 101 passes through developed areas on surface streets.

The proposed bypass project is a function of Caltrans' recognition that increases in congestion and delays due to existing traffic controls (e.g., traffic signals), pedestrian and vehicle cross-traffic, and turning movements, will occur as future traffic volumes increase due to local development and increased interregional traffic if the project is not constructed.

The proposed project is needed to correct these and other problems. These problems are discussed in detail in Chapter 2 (Purpose and Need) of the Draft EIR/EIS, and include:

- Existing facility is the principle north-south arterial through Willits;
- Unsatisfactory level of service for interregional traffic;
- Traffic safety concerns;
- Interregional automobile and truck traffic interference with local travel;
- Levels of noise and vibration in downtown Willits, and;
- Undesirable conditions for bicyclists and pedestrians.

2.4 Objectives Of The Proposed Action

The proposed project would accomplish the following objectives:

- Improve level of service, to LOS "C", for interregional/interstate traffic by minimizing congestion and delays;
- Improve traffic safety;
- Minimize interregional commercial and other through traffic vehicle interference with local traffic;
- Reduce noise and vibration experienced by nearby homes, businesses, schools and other community facilities due to interregional commercial truck and other through traffic, and;
- Improve conditions for bicyclists, pedestrians, and less mobile individuals, including the disabled and elderly.

3 Resource Identification

3.1 Wetland Resources and Other Waters of The U.S.

A delineation of jurisdictional wetlands and other waters of the United States for all alternatives was prepared following the 1987 U.S. Army Corps of Engineers (ACOE) wetlands delineation manual (Environmental Laboratory 1987) and submitted to the ACOE (JSA 1991). The wetland delineation was verified by the ACOE (letter dated April 8, 1998; see Appendix F). The following provides descriptions of the jurisdictional wetlands within the project limits.

Table H-3-1 summarizes the communities that are jurisdictional under Section 404 of the Clean Water Act. Table H-3-2 summarizes the approximate areas of wetland and upland habitats on the floor of Little Lake Valley excluding foothill habitat areas that surround the valley floor.

3.1.1 Riparian Communities

Riparian communities are found along creeks, rivers, drainages, and at other scattered locations throughout the Little Lake Valley floor. Several plant communities ranging from multi-layered woodlands to dense scrub thickets characterize riparian communities in the study area. Riparian woodland communities may have once occupied extensive portions of Little Lake Valley before it was converted to pasture and agricultural uses. Remnant riparian woodlands are found in swamp-like areas that could be interpreted as climax communities on the hydric soils of creek levees and terraces in the central and northern portions of the valley.

Several riparian woodland types occur in the project area. Although most of the riparian types qualify as jurisdictional wetlands (Table H-3-1), each of the riparian types includes areas that would not be considered as jurisdictional due to the absence of wetland soil and hydrology characteristics, although hydrophytic plant species composition remains the same.

Table H-3-1. Wetland/Waters of U.S. in the U.S. 101/Willits Bypass Project Area

Formation	Plant Community	Section 404 Jurisdiction [a]	Sensitive Natural Community [b]
Wooded riparian	Mixed riparian woodland	X	X
	Ash riparian woodland	X	X
	Valley oak riparian woodland	X	X
	Valley oak–ash riparian woodland	X	X
	Willow riparian scrub	X	X
	Mixed riparian scrub	X	X
	Montane riparian woodland	X	X
Marsh	Mixed marsh	X	X
	Cattail marsh	X	X
	Tule marsh	X	X
Meadow	Wet meadow	X	X
	Hay meadow	X	
	Residential meadow	X	
Vernal pool	Vernal pool	X	X
Swale	Swale	X	X
Stock pond	Stock pond/open water	X	
Other waters	Other waters (creeks/channels)	X	X

Notes:

[a] = Jurisdictional wetland communities

[b] = Communities that are either naturally rare, substantially diminished by human activities, have particularly high ecological and human amenity values, or are targeted for protection by state or federal laws and policies (e.g., wetland resources).

Table H-3-2. Habitat Areas on the Floor of Little Lake Valley

Habitat Formation	Approximate Area [ha (ac)]
Wooded riparian	320 (790)
Wet meadow	1050 (2,594)
Marsh	240 (593)
Grassland	650 (1,606)
Oak woodland	40 (99)
Total	2300 (5,682)

Note: Foothill habitats are not included in this table

Riparian habitats, in general, support the greatest diversity of bird species in northern California (Gaines 1974). The variety of plant species, multi-layered vegetation, perennial surface waters, and variety of foods makes riparian habitats especially

attractive to wildlife (Warner 1979). Mature willows, valley oaks, black oaks, and Oregon ash provide nesting habitat for raptors, such as red-tailed hawks, red-shouldered hawks, and white-tailed kites, and for cavity-nesting birds that require mature stands of trees, such as the Nuttall's woodpecker, downy woodpecker, northern flicker, oak (= plain) titmice, house wren and white-breasted nuthatch.

Scrub/shrub willows are dominated by low-stature plants and lacks the multi-layered vegetation of most other riparian types. Although scrub/shrub willow communities tend to support fewer wildlife species than mixed riparian woodland communities, they do provide important cover for deer and shelter and nesting habitat for a variety of resident and migratory birds, such as flycatchers, vireos, and warblers.

Riparian plants, including California grape, blackberry, elderberry, and valley oak provide an important food source for birds and mammals, as well as shelter and nesting habitat. Wildlife species that depend on the nectar, fruits, and seeds of these riparian plants include Anna's hummingbird, black-headed grosbeak, spotted (= rufous-sided) towhee, California towhee, raccoon, ringtail, striped skunk, gray fox, and western gray squirrel.

Riparian vegetation also supports an abundance of insects that feed on foliage and stems during the growing season. These insects, in turn, provide a food source for migratory and resident birds, including Pacific-slope (= western) flycatcher, western wood-pewee, yellow warbler, MacGillivray's warbler, Wilson's warbler, warbling vireo, bushtit, and house wren (Gaines 1974, Remsen 1978, Sanders and Flett 1989, Harris et al. 1988).

The following riparian communities occur in the study area: mixed riparian woodland, ash riparian woodland, valley oak riparian woodland, valley oak-ash riparian woodland, montane riparian woodland, willow riparian scrub, and mixed riparian scrub. A more complete description of specific riparian communities is provided in the Supplemental Natural Environmental Study (NES) (Caltrans 2000).

Because of the historic loss of many riparian communities in California and their importance as shelter, foraging and nesting habitat for many resident and migratory wildlife species, these communities are considered to be sensitive communities.

In the Willits Bypass study area, mixed riparian woodland is found along the major creeks and drainages throughout Little Lake Valley. Ash riparian woodland is common in the northern and central portions of Little Lake Valley. Valley oak riparian woodlands are scattered throughout Little Lake Valley, typically on the low and high terraces along creeks and drainages. Scattered individual valley oaks are common in open fields, while groves of valley oaks occur along creeks, fences, and roads on higher terraces. Montane riparian woodland is found in the foothills of Little Lake Valley, primarily in the western portion of the study area. Willow riparian scrub and mixed riparian scrub communities are found in scattered locations throughout Little Lake Valley.

3.1.2 Meadow Communities

Meadows are herbaceous plant communities dominated by mixtures of perennial grasses and forbs, with other grass-like species present, such as rushes and sedges. Some meadows include individual riparian shrubs and trees.

Three wetland meadow types were identified in the study area: wet meadow, hay meadow, and residential meadow. Each is distinguished by differences in hydrologic characteristics and plant species composition. These meadows typically have flat or concave surface relief, and are located in low-lying troughs and basins with clay soils. These site characteristics help maintain extended periods of soil saturation or flooding during the growing season. A more complete description of the wetland meadow communities is provided in the Supplemental NES (Caltrans 2000).

Wet meadows are found in both natural and artificial settings in Little Lake Valley and in foothill portions of the study area. They develop in areas where the soil and vegetation have remained undisturbed (or only minimally disturbed) for many years. Under natural conditions in the foothill and valley portions of the study area wet meadow vegetation is found in swales, drainages, in areas around springs and seeps, and along terraces and alluvial fans. In artificial settings, vegetation characteristic of wetland meadows is found in drainage ditches and in depressions created by excavation.

Sedges and rushes comprise approximately 40%–80% of the total hydrophytic vegetation in wet meadows. Other species include redtop, meadow-foxtail, California oatgrass, creeping ryegrass, Kentucky fescue, pennyroyal, Timothy grass, western

buttercup, curly dock, common velvet grass, and bird's-foot trefoil. In addition, ash and valley oak trees are found sporadically in some wet meadows. Baker's meadowfoam, a California rare species, is locally common in wet meadow areas.

Wet meadow communities receive water from various sources, including agricultural irrigation, shallow water tables, and flooding when creeks flow beyond their banks.

The presence of a mosaic of dry meadows, marshes, and open water near most of the wet meadows produces a diversity of habitats that enhances their value for wildlife.

Wet meadow habitats provide important foraging habitat for waterfowl species, including mallard, cinnamon teal, and other wetland wildlife species, such as great blue heron, American coot, killdeer, common snipe, black phoebe, cliff swallow, barn swallow, red-winged blackbird, striped skunk, Pacific tree-frog, common garter snake, and western terrestrial garter snake. In addition, wet meadows provide potential nesting habitat for mallards and cinnamon teal.

Because wet meadows provide habitat for a variety of wildlife and plant species; are relatively scarce in the region; and are threatened by agriculture and urban development, they are considered a sensitive community. The overall extent and value of this habitat has been greatly reduced in California by artificial drainage, land conversion, and overgrazing. The community's status as a sensitive habitat is supported by policies of CDFG and USFWS that call for "no net loss," a goal for all wetlands.

Hay meadows are similar to wet meadows, except that hay meadows consist of irrigated pastures that are dominated by non-native herbaceous plant species. The irrigation enhances the existing wetland hydrologic characteristics that occur on these sites. Hay meadows are common throughout valley portions of the study area.

Residential meadows are found in rural and urban locations in the Willits area. Residential meadows are man-made communities dominated by non-native ornamental and horticultural plant species. Residential meadows that occur in areas that historically consisted of wetland habitats usually retain their wetland hydrologic and soil characteristics, even though they have been developed.

3.1.3 Marsh Communities

Marsh communities qualify as jurisdictional wetlands by the ACOE and are dominated by perennial emergent plant species, consisting of varying numbers of herbs and grass-like plant species (rushes and sedges). The vegetative cover is often very dense. In contrast to meadow communities, which are seasonally saturated, marsh communities usually have soils that are saturated throughout most of the year. Floodwater from Outlet Creek and shallow groundwater are the principal sources of water for marshes in Little Lake Valley.

Three marsh communities were identified in the study area: mixed marsh, tule marsh, and cattail marsh. A more complete description on specific marsh communities is provided in the Supplemental NES (Caltrans 2000).

The tule, cattail, and mixed marshes in the study area provide shelter, foraging and breeding habitat for wildlife, including waterfowl, shorebirds, and wading birds. During winter, when sufficient water is present, freshwater marshes contain seeds and invertebrates that provide a food source for waterfowl, including wood duck, mallard, American wigeon, cinnamon teal, green-winged teal, bufflehead, and common goldeneye.

Tule, cattail, and mixed marsh vegetation also occurs in other wetland habitats, such as wet meadows, swales, and stock ponds. Marshes in the study area that support tall emergent vegetation provide nesting habitat and cover for wildlife species, including American bittern, green heron, Virginia rail, sora rail, marsh wren, common yellowthroat, song sparrow, and red-winged blackbird.

Because of its regional scarcity, threats to remaining marsh habitats, and importance to wetland-dependent plant and wildlife species, mixed, tule and cattail marshes are considered to be sensitive communities.

In the study area, mixed marsh and tule marshes are common in the northern portion of Little Lake Valley. Cattail marsh is restricted to the northern portion of Little Lake Valley.

3.1.4 Vernal Pools

Vernal pools are small basins that collect rainfall and surface runoff from a surrounding grassland watershed. The presence of an impervious layer of subsoil prevents water from infiltrating down into the soil profile, which causes water to remain in depressions for longer periods of time. The frequency and duration of ponding and saturation vary among vernal pools, depending on the size of the basin and its watershed, depth to the impervious subsoil layer, and patterns and amounts of rainfall.

In the central portion of Little Lake Valley, vernal pools are found throughout the meadow habitats. They are distinguished from meadow habitats by the difference in plant species composition, topography, and surface hydrologic characteristics. Vernal pool vegetation differs from meadow vegetation in that annual hydrophytic forbs are the typical dominants.

Characteristic annual hydrophytes include bracteate popcornflower, purslane, speedwell, downingia, Bolander's water-starwort, common toad rush, Baker's and Douglas' meadowfoam, semaphore grass, and field owl's clover. Herbaceous perennials include spreading rush, slender-beaked sedge, green-sheath sedge, meadow-foxtail, Timothy grass, pennyroyal, and curly dock.

Vernal pools provide foraging habitat, breeding habitat, and cover for a number of vernal pool-dependent animal species, including fairy shrimp. Due to their seasonal occurrence and limited area, vernal pools support few bird and mammal species.

Although vernal pools are ephemeral aquatic habitats, a number of invertebrate species and amphibians have adapted to, and are dependent on, this habitat. When standing water is available, vernal pools provide breeding habitat for Pacific tree frogs and a number of aquatic invertebrate species, including crustaceans such as clam shrimp (*Cyzicus*), and water flea (*Daphnia*).

In winter and spring, waterfowl, shorebirds, and wading birds, including mallard, cinnamon teal, killdeer, common snipe, and great blue heron may use vernal pools for resting or foraging.

Swales

Swales resemble vernal pools due to similarities in vegetation and soil conditions. However, swales are generally narrow linear drainage features that traverse uplands and convey surface runoff during and after rainfall. Swales in Little Lake Valley typically occur on alluvial fans and creek terrace surfaces.

In the project area, swale vegetation is similar to that described above for vernal pools except that the proportion of grass cover in swales is generally high.

Swales and vernal pools differ in their value as wildlife habitats because of differences in the duration of ponding, with vernal pools typically retaining water longer than swales. In winter and spring, swales can offer habitat to amphibians and waterfowl.

Most swales in the study area are degraded by livestock grazing, reducing their value as wildlife habitat. For most of the year, wildlife species that use swales are similar to those that use annual grasslands, because they are dry most of the year. Wildlife species that typically forage or breed in dry swales include western meadowlarks, striped skunks, black-tailed hares, coyotes, and gopher snakes.

In Little Lake Valley and in other regions of California, swales form under the same circumstances as vernal pools.

Stock Ponds/Open Water

Stock ponds are impoundments of water that are typically constructed within drainages to provide year-round water sources for livestock and irrigation. Water levels fluctuate throughout the year with fluctuations in precipitation, runoff, evapotranspiration rates, and groundwater levels.

Many stock ponds have both vegetated and unvegetated (open water) components. In Little Lake Valley, stock ponds support cattail, tule, or mixed marsh vegetation around the upper margins of the ponds, and hydrophytic plant species, such as watercress, slender hairgrass, western mannagrass, aquatic buttercup, water milfoil, spikerush and water dock, along the water edges and shallow water margins. Deeper water areas of stock ponds usually lack vegetation.

Stock ponds and other open water habitats can attract large numbers of wildlife, especially if they contain water year-round. Stock ponds provide drinking water for many wildlife species, including black-tailed deer, gray fox, raccoon, striped skunk, Virginia opossum, and western gray squirrel and provide important breeding habitat for amphibians, including western toad and Pacific treefrog, and western pond turtle. In the study area, however, livestock grazing has reduced the vegetative cover around most of the stock ponds.

Wildlife observed at stock ponds during the field surveys included Pacific tree-frog, common garter snake, northwestern pond turtle, great blue heron, green heron, wood duck, mallard, American wigeon, ring-necked duck, hooded merganser, and American coot. Stock ponds are found throughout Little Lake Valley.

Other Waters of the United States

Other jurisdictional waters of the United States include rocky, unvegetated intermittent and perennial creek channels, which are found in several settings not described above. These areas do not qualify as wetlands because they often lack hydrophytic vegetation or hydric soil conditions. However, "other waters" are subject to ACOE jurisdiction.

Because other waters of the U.S. provide habitat for aquatic wildlife, drinking water for terrestrial wildlife species, and ability to influence the quality of wildlife and fishery habitat in downstream reaches, other waters of the U.S. are considered sensitive natural communities.

3.2 Endangered, Threatened, And Other Special Concern Species

3.2.1 Special-Status Plant Species

Fourteen special-status plant species were identified as potentially occurring in the study area. Table 3-3 provides information on the plant species' legal status, geographic range, habitat association, and their probability of inhabiting the study area. Three special-status plant species: Baker's meadowfoam, Baker's navarretia, and glandular western flax, were observed within the study corridors.

3.2.2 Special-Status Wildlife Species

Special-status wildlife species occurring or potentially occurring in the Willits Bypass study area are listed in Table H-3-4, which summarizes their federal and state listing status, habitat requirements, geographic ranges, and potential to occur in the project area. Wildlife surveys detected the presence of four wildlife species that are listed federally and/or by the state as threatened or endangered: northern spotted owl, bald eagle, American peregrine falcon and willow flycatcher; and eleven wildlife species of special concern: osprey, golden eagle, Cooper's hawk, sharp-shinned hawk, northern harrier, California yellow warbler, yellow-breasted chat, red tree vole, foothill yellow-legged frog, white-tailed kite, and northwestern pond turtle.

3.2.3 Special-Status Fish Species

Surveys conducted in the project study area for special-status fish detected the presence of three federally listed threatened fish species: the coho salmon, chinook salmon, and steelhead. Special-status fish species occurring or potentially occurring in the study area are listed in Table H-3-5, which includes their legal status, habitat requirements, and geographic ranges.

Table H-3-3. Special-Status Plants Identified as Potentially Occurring in the U.S. 101/Willits Bypass Study Area

Common Name and Scientific Name	Status* Federal/ State/ CNPS	Geographic Range	Habitat	Potential to Occur within the Project Area**
Federal and State Listed Species				
Roderick's fritillary *Fritillaria roderickii (F. biflora* var. *biflora)*	--/E/1B	Limited area in central Mendocino County	Grasslands and oak woodlands, generally near the coast	very low
Burke's goldfields *Lasthenia burkei*	E/E/1B	Lake, Mendocino, and Sonoma Counties	Wet meadows and vernal pools	very low
Baker's meadowfoam *Limnanthes bakeri*	SC/R/1B	Mendocino County, including Little Lake Valley and near Laytonville	Vernal pools, swales, other seasonal wetlands	present
Milo Baker's lupine *Lupinus milo-bakeri*	SC/T/1B	Colusa and Mendocino Counties; reported from Route 101 near Longvale [5 km (3 mi.) north of Little Lake Valley]	Oak and mixed evergreen-oak-conifer forests; frequents roadsides and similar disturbed areas	moderate
Hoover's semaphore grass *Pleuropogon hooverianus*	SC/R/1B	Mendocino, Marin, Sonoma Counties	Marshes, meadows, and other types of seasonal wetlands where water ponds during the wet season	low
Showy Indian clover *Trifolium amoenum*	E/--/1B	Historically in Coast Ranges from Santa Clara to Mendocino Counties; now known only in Sonoma County	Grassland, oak woodland	low
Other Special Status Species				
Livid sedge *Carex livida*	--/--/1A	Reported from coast of Mendocino County, Oregon, and Washington; last seen in California in 1866	Marshes and swamps	very low
Glandular western flax *Hesperolinon adenophyllum*	SC/--/1B	North and central Coast Ranges, especially Lake and Mendocino Counties	Serpentine soils in chaparral and grasslands	present
Thin-lobed horkelia *Horkelia tenuiloba*	SC/--/1B	Marin, Mendocino, and Sonoma Counties	Mesic openings in chaparral	low

Common Name and Scientific Name	Status* Federal/ State/ CNPS	Geographic Range	Habitat	Potential to Occur within the Project Area**
Mendocino bush-mallow *Malacothamnus mendocinensis*	SC/--/1A	Known only from near Ukiah; last seen in 1938	Open banks in oak woodland	very low
Baker's navarretia *Navarretia leucocephala* ssp. *Bakeri*	--/--/1B	Interior north Coast Ranges and western Sacramento Valley	Oak woodlands, conifer forests, wet meadows, grasslands, vernal pools	present
Gairdner's yampah *Perideridia gairdneri ssp. gairdneri*	SC/--/4	Known from the coast from Kern to Mendocino County	Broadleaf forest, chaparral, grasslands, vernal pools	very low
Nuttall's pondweed *Potamogeton epihydrus* ssp. *Nuttallii*	--/--/2	Coast Ranges of Mendocino County, Several Sierra Nevada Counties; Oregon and Washington	Marshes, swamps, slow moving streams, ponds, lakes, and irrigation ditches	high
Beaked tracyina *Tracyina rostrata*	--/--/1B	Humboldt, Lake, and Sonoma Counties	Oak woodlands, hardwood forest, open grassy areas, probably areas where soil surface is visible (i.e., no thatch layer, bare sterile ground, and roadcuts)	low

* Status explanations:

Federal
E = listed as endangered under the federal Endangered Species Act.
SC = species of concern.

State
E = listed as endangered under the California Endangered Species Act.
T = listed as threatened under the California Endangered Species Act.
R = listed as rare under the California Native Plant Protection Act.

California Native Plant Society
List 1A = species presumed extinct in California.
List 1B = species rare, threatened, or endangered in California and elsewhere.
List 2 = species rare, threatened, or endangered in California but more common elsewhere.
List 3 = species about which more information is needed to determine their status.
List 4 = species of limited distribution.
**Probability based on information available after field surveys were conducted: proximity of nearest occurrences, the geographic extent of the species, and suitability of habitats in the Willits project area.

Table H-3-4. Special-Status Wildlife Species Known or Having Potential to Occur in the U.S. 101/Willits Bypass Study Area

Species	Status* Federal/ State	California Distribution	Habitats	Potential to Occur within the Project Area
Federal and State Listed Species				
Birds	T/E	Nesting sites from the Oregon border to Eureka and between Santa Cruz and Half Moon Bay; winters near shore and offshore along the entire California coastline	Mature, coastal coniferous forests for nesting; forages in nearby coastal water and nests in conifer stands greater than 150 years old and may be located up to 56 km inland	Species surveyed for but not observed in project area. No habitat present in the project area.
Marbled murrelet *Brachyramphus marmoratus*				
Marbled murrelet Critical Habitat			Critical Habitat is USFWS designated areas essential to marbled murrelet's survival and is concentrated on defined large, contiguous blocks of late-successional forest lands along the coastal Pacific Northwest.	Designated Critical Habitat does not occur in the project area
American peregrine falcon *Falco peregrinus anatum*	D/E	Permanent resident on the north and south Coast Ranges; may summer on the Cascade and Klamath Ranges south through the Sierra Nevada to Madera County; winters in the Central Valley south through the Transverse and Peninsular Ranges and the plains east of the Cascade Range	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large populations of other bird species	Species observed in project area
Bald eagle *Haliaeetus leucocephalus*	PR/E	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and in the Lake Tahoe area; winter range over most of California except the southeastern deserts and high altitudes in the Sierras	In western North America, nests and roosts in coniferous forests within 1.5 km (0.9 miles) of a lake, reservoir, river, or the ocean	Species observed in project area
Northern spotted owl *Strix occidentalis caurina*	T/--	A permanent resident throughout its range; found in the north Coast, Klamath, and western Cascade Ranges, from Del Norte to Marin Counties	Dense, old-growth forests dominated by conifers, with topped trees or oaks available for nesting crevices	Species observed in project area
Northern spotted owl Critical Habitat			Critical Habitat is USFWS designated areas essential to the northern spotted owl's conservation and applies solely to the owl's habitat units on federal lands	Designated Critical Habitat does not occur in the project area
Little willow flycatcher *Empidonax traillii brewsteri*	SC/E	Central and northern California along the Coast Range from Santa Barbara County north to Oregon	Nests in riparian areas and often forages in adjacent open areas and meadows	Species observed in project area, as a migrant only

Species	Status* Federal/ State	California Distribution	Habitats	Potential to Occur within the Project Area
Other Special Status Species				
Birds				
Cooper's hawk *Accipiter cooperi*	--/SCS	Throughout California except high altitudes in the Sierra Nevada; winters in the Central Valley, southeastern desert regions, and plains east of the Cascade Range; permanent residents occupy the rest of the state	Nests primarily in riparian forests dominated by deciduous species and in densely canopied forests and forages in open woodlands	Species observed in project area
Northern goshawk *Accipiter gentilis*	SC/SCS	Permanent resident on the Klamath and Cascade Ranges, the north Coast Ranges from Del Norte to Mendocino Counties, and in the Sierra Nevada south to Kern County; winters in Modoc, Lassen, Mono, and northern Inyo Counties; rare in southern California	Nests and roosts in red fir, Jeffrey pine, and lodgepole pine forests; hunts in forests and forest clearings and meadows	Species surveyed for but not observed in project area
Sharp-shinned hawk *Accipiter striatus*	--/SCS	Permanent resident in the Sierra Nevada, Cascade, Klamath, and north Coast Ranges at mid-elevations, as well as along the coast in Marin, San Francisco, San Mateo, Santa Cruz, and Monterey Counties; winters over the rest of the state except very high elevations	Dense-canopy ponderosa pine or mixed conifer forest and riparian habitats	Species observed in project area
Golden eagle *Aquila chrysaetos*	PR/SCS,FP	Mountains and foothills throughout California	Cliffs and escarpments or tall trees for nesting; forages in grasslands, chaparral, and oak woodlands	Species observed in project area
Northern harrier *Circus cyaneus*	--/SCS	North and central coast, central valley, and northeastern California and has been recorded on the eastern side of the Sierra Nevada mountains during winter	Grasslands, meadows, marshes, and seasonal and agricultural wetlands providing tall cover	Species observed in project area
California yellow warbler *Dendroica petechia brewsteri*	--/SCS	Nests over most of California except the Central Valley, the Mojave Desert region, and high elevations in the Sierra Nevada; winters along the Colorado River and in parts of Imperial and Riverside Counties	Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders, or in mature chaparral; may also use oaks, conifers, and urban areas near stream courses	Species observed in project area
White-tailed kite *Elanus caeruleus*	--/CP	Lowland areas west of Sierra Nevada from northern Sacramento Valley south and coastal valleys and foothills to western San Diego County	Low foothills or valley areas with valley or live oaks, riparian areas, and marshlands near open grasslands for foraging	Species observed in project area
Prairie falcon *Falco mexicanus*	--/SCS	Resident throughout California	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large populations of other bird species	Species observed in project area
Yelow-breasted chat *Icterias virens*	--/SCS	Uncommon migrant in California; nests in a few locations with appropriate habitat such as Sweetwater Creek, El Dorado County; along the Russian River, Sonoma County; Little Lake Valley, Mendocino County; and Putah Creek, Yolo County	Nests in dense riparian habitats dominated by willows, tall weeds, blackberry vines, and grapevines	Species observed in project area

Species	Status* Federal/ State	California Distribution	Habitats	Potential to Occur within the Project Area
Osprey *Pandions haliaetus*	SC/SCS	Found in northern California primarily in the Coast Range and also in the Klamath and western Cascade Ranges	Found adjacent to lakes, rivers, coastal marine, and estuary habitats	Species observed in project area
Mammals				
Pacific fisher *Martes pennanti pacifica*	SC/SCS	Coastal mountains from Del Norte to Sonoma Counties; east through Cascades to Lassen County, south in Sierra Nevada to Kern County	Mixed conifer habitats with high overstory cover prefering riparian habitat	Species surveyed for but not observed in project area
Red tree vole *Arborimus pomo*	--/SCS	Occurs along the north Coast Range from Del Norte County south to Sonoma County, California	Inhabits old-growth forest of Douglas-fir, redwood, or montane hardwood-conifer forest	Species may occur in project area
Townsend's western big-eared bat *Plecotus townsendii townsendii*	SC/SCS	Coastal regions from Del Norte County south to Santa Barbara County	Roosts in caves, tunnels, mines, and dark attics of abandoned buildings; sensitive to disturbances and may abandon a roost after on-site visit	Species not surveyed for but may occur in project area
Amphibians				
Tailed frog *Ascaphus truei*	SC/SCS	Occurs in California from Del Norte county south to central Sonoma County	old, perennial, swift flowing streams and is associated with mature, old growth forest	Species surveyed for but not observed in project area
Northern red-legged frog *Rana aurora aurora*	SC/SCS	Found along the coast and coastal mountain ranges of California from Del Norte to Mendocino	Permanent and semi-permanent aquatic habitats such as creeks and cold water ponds bordered with grassy or shrubby vegetation; may estivate in rodent burrows or cracks during dry periods	Species surveyed for but not observed in project area
Foothill yellow-legged frog *Rana boylei*	SC/SCS	Occurs in stream habitat throughout northwestern California, the Coast Range, and the Sierra Nevada foothills	River or creeks in woodlands or forests with rock and gravel substrate and low overhanging vegetation along the edge usually found near riffles with rocks and sunny banks nearby	Species observed in project area
Olympic salamander *Rhyacotriton variegatus*	SC/SCS	Occurs in stream habitat throughout northwestern California, the Coast Range, and the Sierra Nevada foothills	River or creeks in woodlands or forests with rock and gravel substrate and low overhanging vegetation along the edge	Species surveyed for but not observed in project area

Species	Status* Federal/ State	California Distribution	Habitats	Potential to Occur within the Project Area
Reptiles				
Northwestern pond turtle *Clemmys marmorata marmorata*	SC/SCS	In California, range extends from Oregon border south along coast to San Francisco Bay, inland through Sacramento Valley, and on the western slope of Sierra Nevada	Woodlands, grasslands, and open forests; occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms	Species observed in project area

Status explanations:

Federal

E = listed as endangered under the federal Endangered Species Act
T = listed as threatened under the federal Endangered Species Act
PE = proposed endangered under the federal Endangered Species Act
D = delisted from the federal Endangered Species Act , monitored for 5 years
SC = species of concern

PR = protected under the "Bald Eagle Protection Act"

State
E = listed as endangered under the California Endangered Species Act
FP = fully protected under the California Fish and Game Code
SCS= special concern species
CP = fully protected species in California

Table H-3-5. Special Status Fish Species Known or Having Potential to Occur in the U.S. 101/Willits Bypass Study Area

Species	Status %	California Distribution	Habitats	Potential to Occur within the Project Area
Federal Listed Species				
Tidewater goby *Eucyclogobius newberryi*	E/SCS	From San Diego County north to the Smith River, along coastal California	Shallow coastal lagoons and lower stream reaches with brackish water utilizing marshy habitats where they can avoid high winter flows	Tidewater goby would not occur since project area lacks coastal lagoon habitat type, which is necessary to support this species
Central California Coast coho salmon *Oncorhynchus kisutch*	T/SCS	From Punta Gorda, California, south to San Lorenzo River, California and is a distinct Evolutionarily Significant Unit	Low gradient coastal streams with cool water temperatures; juveniles utilize deep pools with woody debris and after 1 year in freshwater, juveniles migrate to the ocean and spend 1-3 years in saltwater; adults return to natal streams to spawn	Species would not occur in project area since the Eel River drainage is north of Punta Gorda, California
Southern Oregon/Northern California coho salmon *Oncorhynchus kisutch*	T/SCS	From Cape Blanco, Oregon south to Punta Gorda, California and is a distinct Evolutionarily Significant Unit	Coastal rivers with cool water temperatures; juveniles spend up to 15 months in fresh water utilizing deep pools with woody debris and migrate to the ocean and spend 1-3 years in saltwater; adults return to natal streams to spawn	Species historically known to occur in the project area
Central California steelhead *Oncorhynchus mykiss*	T/SCS	From Russian River in Mendocino County south to Soquel Creek in Santa Cruz County	Cold, clear water with clean gravel of appropriate size for spawning; juveniles migrate to ocean after spending 1-4 years in freshwater	Species would not occur in project area since the Eel River drainage is north of Russian River
Northern California steelhead *Oncorhynchus mykiss*	T/SCS	From Redwood Creek in Humboldt County south to the Gualala River in Sonoma and Mendocino Counties	Cold, clear water with clean gravel of appropriate size for spawning; juveniles migrate to ocean after spending 1-4 years in freshwater	Species known to occur in the project area
Southern Oregon/ California Coast chinook salmon *Oncorhynchus tshawytscha*	T/--	From Cape Blanco, Oregon south to Punta Gorda, California	Cold, clear water with clean gravel of appropriate sizes for spawning; migrate to ocean after spending one growing season in freshwater	Species known to occur in the project area
Federal Candidate Species				
Coastal cutthroat trout *Oncorhynchus clarki clarki*	C/SCS	Coastal streams from Seward, Alaska to the Eel River, California; in the Eel River, they occur upstream to Fortuna, California	Small, low gradient coastal streams and estuarine habitats utilizing pools with fallen logs, undercut banks, and boulders for cover; some juveniles migrate to ocean their first year while others spend up to 5 years in freshwater	Species would not occur in project area since Little Lake Valley is more than 60 miles upstream of Fortuna, California

* Status explanations:
Federal
E = listed as endangered under the federal Endangered Species Act
T = listed as threatened under the federal Endangered Species Act
PT = proposed threatened under the federal Endangered Species Act
C = federal candidate species
State
SCS = special concern species

4 FULL RANGE OF ALTERNATIVES

4.1 Alternatives Withdrawn From Further Consideration

A number of alternative routes to bypass the City of Willits were considered over the years. Approximately thirty alternatives, including a two-lane concept and additional interchange locations, were considered but later rejected because they were determined to be infeasible, or "not practicable," or had severe environmental consequences. The rejected alternatives and the reason(s) for their rejection are summarized in Chapter 3 (Description of the Proposed Action and its Alternatives) of the Draft EIR/EIS.

4.2 Alternatives Under Consideration

Five alternatives are examined in the Draft EIR/EIS and this 404 (b)(1) Alternatives Analysis, including four build alternatives and one No Build alternative. The four build alternatives, Alternatives C1T, E3, J1T, and LT involve the construction of a four-lane freeway (freeway alternatives). The No Build alternative is an alternative in which no new freeway or highway construction would occur.

At the south end of the project area, all of the freeway alternatives depart from the existing four lane U.S. 101 in the Upper Haehl Creek area. Alternatives C1T, J1T, and LT cross the Little Lake Valley east of the City of Willits and are also referred to as the "center valley" alternatives in this document. Alternative E3 is located in the hills west of the City of Willits. Map 3 of the Draft EIR/EIS (Volume 2) shows the routes of the alternatives.

The No Build alternative would consist of the continued use of the existing U.S. 101, which passes through the City. However, future improvements could be constructed. The No Build alternative is discussed for the purpose of comparing the effects of the build alternatives with a future scenario in which a bypass would not be constructed.

In 1994, a formal Memorandum of Understanding (MOU) was executed between the United States Army Corps of Engineers (ACOE), USEPA, Federal Highways Administration (FHWA), United States Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and Caltrans. The MOU implements a policy to

improve coordination between agencies and to integrate National Environmental Policy Act (NEPA) and Clean Water Act Section 404 procedures. Under the guidelines of the MOU, signatory agencies have agreed to the project's nodal choice, purpose and need, and alternatives under consideration for the draft environmental document (see Appendix G of the Draft EIR/EIS for concurrence letters).

Each alternative, as appropriate, was evaluated by segments that could be combined to potentially create a hybrid alternative. This nodal approach divides several of the alternatives into two or three parts. The text and tables in this document, for the most part, discusses data in a manner that allows environmental impacts of each segment to be evaluated separately. For some environmental issues, however, analysis by segment was not possible or prudent; for example, certain biological resources or community issues do not lend themselves to an effective segmental analysis.

Chapter 3 of the Draft EIR/EIS provides specific descriptions of each of the proposed alternatives under consideration.

5 Project Impacts

5.1 Wetland Resources and Other Waters of The U.S.

Permanent impacts to waters of the United States are greatest for Alternative C1T (52.2 ha [129.1 ac]); intermediate for Alternatives J1T and LT (21.1 - 29.9 ha [52.4 – 72.8 ac]); and least for Alternatives E3 (6.1 ha [15.1 ac]) (Tables 5-1).

5.1.1 Alternative C1T

Alternative C1T would impact approximately 52.3 ha (129.1 ac) of wetland habitat that qualifies as waters of the U.S. Impacts to wetlands associated with Alternative C1T are summarized in Table 5.1.

Impacts to wetlands resulting from construction of Alternative C1T would be greater than for the other alternatives.

Alternative C1T would also require the realignment of approximately 400 m (1,300 ft) of Mill Creek and a 1,600 m (5,250 ft) reach of Outlet Creek bordering the east

side of the Northwest Pacific Railroad tracks, in the northern portion of Little Lake Valley. This, as well as the filling of large areas of wetland habitat, has the potential to directly and indirectly alter surface and groundwater hydrologic conditions of several flood basins in Little Lake Valley that provide habitat for several special-status species found in Little Lake Valley. Because of the magnitude of direct and indirect wetland impacts within Little Lake Valley, Alternative C1T is considered an adverse impact (Caltrans 2000).

Table H-5-1. Direct Impacts to Jurisdictional Waters of the U.S./Wetlands

	Alt. C1T		Alt. E3		Alt. J1T		Alt. LT		OWH
	south	north	south	north	south	north	south	north	
Jurisdictional Waters of the U.S./Wetlands									
Mixed riparian woodland	3.1 (7.7)*	3.3 (8.2)	2.6 (6.4)	0.3 (0.7)	1.9 (4.7)	0.5 (1.1)	3.2 (7.9)	-	-
Ash riparian woodland	-	0.2 (0.4)	-	0.1 (0.2)	0.1 (0.2)	1.4 (3.5)	-	0.4 (1.1)	-
Valley oak riparian woodland	0.3 (0.7)	0.4 (1.1)	-	-	1.0 (2.5)	-	0.3 (0.7)	-	-
Valley oak-ash riparian woodland	1.2 (3.0)	4.0 (10.0)	-	-	0.1 (0.2)	-	0.5 (1.2)	0.1 (02)	-
Mixed willow scrub	1.7 (4.2)	1.4 (3.4)	-	-	-	-	-	-	-
Mixed riparian scrub	-	0.5 (1.1)	-	-	0.4 (1.0)	0.2 (0.4)	-	0.2 (0.4)	-
Montane riparian woodland	-	-	-	0.2 (0.5)	-	0.04 (0.1)	-	0.04 (0.1)	-
Wet meadow *	12.1 (29.9)	17.8 (44.0)	1.1 (2.7)	0.2 (0.5)	2.2 (5.4)	7.7 (19.1)	13.5 (33.3)	8.7 (21.6)	-
Residential meadow	0.1 (0.2)	-	0.2 (0.5)	-	0.1 (0.2)	-	-	-	-
Hay meadow	2.9 (7.2)	-	-	-	3.4 (8.4)	-	-	-	-
Mixed marsh	-	2.4 (6.0)	-	-	-	1.7 (4.3)	-	1.7 (4.3)	-
Tule marsh	-	0.04 (0.1)	-	-	-	-	-	-	-
Vernal pool	0.1 (0.2)	-	0.1 (0.2)	-	0.4 (1.0)	0.004 (0.01)	0.2 (0.5)	0.004 (0.01)	-
Swale	0.8 (2.0)	0.004 (0.01)	-	-	0.4 (1.0)	-	0.3 (0.7)	-	-
Stock pond	-	-	0.4 (1.0)	-	0.1 (0.2)	0.2 (0.4)	-	0.2 (0.4)	-
Other waters	-	-	0.7 (1.7)	0.2 (0.5)	-	-	0.1 (0.2)	-	-
Open water	-	-	-	-	-	-	-	-	-
Total	**22.3 (55.1)**	**30.0 (74.2)**	**5.1 (12.6)**	**1.0 (2.5)**	**9.5 (23.5)**	**11.6 (28.9)**	**18.1 (44.7)**	**11.3 (28.1)**	**-**
Cumulative Total	**52.3 (129.1)**		**6.1 (15.1)**		**21.1 (52.4)**		**29.4 (72.8)**		**-**

* Units in ha (ac).

** Includes permanent impacts only. Construction of a viaduct along the valley alternatives would temporarily affect wet meadow habitat, including 1.6 ha for C1, 2.2 ha for J1, and 1.7 ha for L.

5.1.2 Alternative E3

Alternative E3 would impact approximately 6.1 ha (15.1 ac) of habitat that qualifies as waters of the United States, including wetlands. This relatively low magnitude of wetland impact is the lowest impact compared to the other build alternatives. Approximately half of the affected wetlands on this alternative include mixed riparian woodland [3.0 ha (7.4 ac)]. Impacts to wetlands associated with Alternative E3 are summarized in Table 5-1.

Several intermittent drainages that qualify as waters of the U.S. would require culverts ranging in length from 150 m (492 ft) to 300 m (984 ft). These long culverts would potentially increase velocities and concentrate flows affecting downstream reaches.

5.1.3 Alternative J1T

Alternative J1T would impact about 21.1 ha (52.4 ac) of habitat that qualifies as waters of the U.S., including wetlands. This magnitude of wetland impact is intermediate among the alternatives, but is extensive from a local and regional perspective.

Over two-thirds of the affected wetlands on this alternative include meadow habitat [about 14.5 ha (35.9 ac). Impacts to wetlands associated with Alternative J1T are summarized in Table 5-1.

Alternative J1T would include the construction of a viaduct approximately 1,600 m (5,250 ft) long, which would limit the potential for the alteration of surface and groundwater hydrologic conditions. The viaduct would also reduce potential indirect effects to nearby wetlands, and to plant and wildlife species dependent on these aquatic habitats.

5.1.4 Alternative LT

Alternative LT would impact approximately 29.4 ha (72.8 ac) of habitat that qualifies as waters of the U.S., including wetlands. This magnitude of impact is intermediate among the alternatives, but is substantial from a local and regional perspective.

Most of the wetlands affected by Alternative LT consist of 22.2 ha (54.9 ac) of wet meadows. Impacts to wetlands associated with Alternative LT are summarized in Table 5-1.

5.1.5 Alternatives C1T, J1T, LT: Designated Borrow Site

Excavation activities in the designated borrow site at the Oil Well Hill area for fill material will not directly affect any wetlands or other waters of the U.S. subject to ACOE jurisdiction.

5.2 Special-Status Plants

5.2.1 Alternative C1T

Alternative C1T would directly impact populations of Baker's meadowfoam and could indirectly affect populations of this species due to changing local hydrologic conditions resulting from the realignment of Mill and Outlet Creeks, at the north end of the valley. The C1T alternative would not directly or indirectly affect Baker's navarretia or glandular dwarf flax.

Baker's Meadowfoam

Baker's meadowfoam is listed by the state as rare. It is a federal special of concern and a California Native Plant Society (CNPS) List 1B species. It is found only in Mendocino County, with populations occurring in Little Lake Valley (Willits), Laytonville, and north of Covelo. Baker's meadowfoam occurs in seasonal marshes, vernal pools, swales and other types of seasonal wetlands.

Alternative C1T would directly impact four Baker's meadowfoam populations, consisting of approximately 44,000 plants (10,300 south and 33,700 north) and nearly 1.3 ha (3.2 ac) of occupied habitat (Table H-5-1). Most of this impact occurs along the northern portion of the alignment. The populations remaining in these locations would be subject to potential indirect hydrologic and fragmentation effects, including the very large population at the north end of Little Lake Valley where a portion of Mill and Outlet creeks would be realigned. This highway alternative also separates flood basins from other areas, potentially preventing the opportunity for seeds produced in the Haehl-Baechtel meta-population to reach the central and northern portion of Little Lake Valley. Because the majority of the area occupied by Baker's

meadowfoam in Little Lake Valley occurs primarily in the northern and northeastern portion of the valley, Alternative C1T would remove a relatively small percentage of the total population. However, because of the rarity of this species, any impact would be considered adverse.

Table H-5-2. Special-Status Plant Nodal Impact Summary

	Alternative:	C1T		E3		J1T		LT	
	Segment:	south	north	south	north	south	north	south	north
Baker's Meadowfoam*	Approximate # of Plants	10,300	33,700	-	-	2,000	33,200	-	33,200
	Number of Populations	1	2	-	-	1	1	-	1
	Area [ha (ac)]	0.1 (0.2)	1.2 (3.0)	-	-	1.4 (3.5)	0.2 (0.5)	-	0.2 (0.5)
Glandular western flax	Approximate # of Plants	-	-	-	100	-	-	-	-

* 30 populations have been identified in Little Lake Valley ranging from approximately 100 to over 8 million individuals.

5.2.2 Alternative E3

Glandular Western Flax

Glandular western flax is a federal species of concern and a CNPS List 1B species. It has no state status. This species occurs in the inner Coast Range of Humboldt, Lake and Mendocino Counties, and is found on semi-barren soils associated with grassland and chaparral habitats. It is most often found on serpentine-derived soils.

Alternative E3 would have a direct impact on a population of the glandular western flax. One small population (<100 plants) of four would be directly impacted by Alternative E3 along the northern portion of the alignment. Alternative E3 would not adversely affect populations of Baker's meadowfoam.

5.2.3 Alternative J1T

Baker's Meadowfoam

Alternative J1T would directly impact two populations of Baker's meadowfoam that include approximately 35,000 plants and 1.6 ha (4.0 ac) of habitat (H-5-2). The remaining fragments from the two directly affected populations are exposed to

hydrologic and fragmentation effects. The J1T alternative would not adversely affect Baker's navarretia or glandular western flax.

5.2.4 Alternative LT

Baker's Meadowfoam

Alternative LT would directly impact one population of Baker's meadowfoam, impacting approximately 33,000 plants and 0.2 ha (0.5 ac) of habitat (H-5-2). The LT alternative would not adversely affect Baker's navarretia or glandular western flax.

5.2.5 Alternatives C1T, J1T, LT: Designated Borrow Site

Because of the absence of special-status plants at the designated borrow site, excavation in this area for fill material for Alternatives C1T, J1T or LT will not adversely affect special-status plant species.

5.3 Special-Status Wildlife

5.3.1 Alternative C1T

Two special-status bird species may be impacted by the C1T Alternative, the California yellow warbler and yellow-breasted chat.

California Yellow Warbler and Yellow-Breasted Chat

The yellow warbler and yellow-breasted chat are both California species of special concern. They have no federal or state listing status. Both species nest in riparian scrub and riparian forest habitats; and both species were observed nesting in the project area.

Alternative C1T would remove approximately 7.6 ha (18.7 ac) of mixed riparian woodland, 5.9 ha (14.8 ac) of oak riparian woodland, and 3.7 ha (8.9 ac) of scrub riparian habitat, which provides suitable nesting habitat for yellow warbler and yellow-breasted chat. This could cause indirect impacts to at least two existing California yellow warbler nesting territories; and cause direct impacts on one existing yellow-breasted chat nesting territory and indirect impacts on at least four other existing territories.

5.3.2 Alternative E3

Three special-status species would experience habitat losses under Alternative E3, including foothill yellow-legged frogs, northern spotted owls, and red tree voles (Table H-3-4).

Foothill Yellow-Legged Frog

The foothill yellow-legged frog is a federal species of concern and a state species of special concern. This species is found in shallow, shaded streams with rocky substrates. Foothill yellow-legged frogs were observed in streams in the hills west of Little Lake Valley and in two streams on the eastern side of Little Lake Valley.

Alternative E3 would have direct impacts on two known occurrences of foothill yellow-legged frogs and indirect impacts on one other occurrence near the alignment. All drainages crossing this alternative provide habitat for this species most of which occur along the southern portion of the alignment. Several intermittent drainages that provide habitat for foothill yellow-legged frog would require culverts ranging in length from 150 m (492 ft) to 300 m (984 ft). These long culverts would directly impact habitat and have the potential indirect impact by increasing velocities and concentrating flows affecting downstream reaches. The direct and indirect impact to intermittent streams by culvert construction on many of the smaller drainages within this alignment, Alternative E3 would have the greatest impacts on yellow-legged frogs and their stream habitats, which would be considered an adverse impact.

Northern Spotted Owl

The Northern spotted owl is listed federally as a threatened species. It has no state status. The Northern spotted owl occurs primarily in mature and old-growth coniferous forests with well-developed, multi-tiered stratification; and large, decadent trees or snags with broken tops and cavities for nesting. Protocol-level surveys conducted in 1991 and 1992 resulted in finding two pair of spotted owls nesting in the project area, both located at the northern end of the study area. However, protocol-level surveys conducted in 1999 and 2000 did not detect any spotted owls in the project area.

Alternative E3 would remove approximately 127 ha (313 ac) of forest habitat that could provide suitable nesting and foraging habitat, particularly in the northern portion of the alternative where two northern spotted owls historical breeding territories were active in 1992. The loss of 127 ha (313 ac) of potential nesting and

foraging habitat could adversely affect spotted owls that may occur in the general vicinity or individuals that could return to the project area in the future.

Red Tree Vole

The red tree vole is a federal species of concern and a state species of special concern. Red tree voles are almost entirely arboreal (living in trees), and occur in coniferous forests along the Pacific Coast south to Sonoma County, and eastward to Trinity County.

The forest habitats occurring in Alternative E3 could provide suitable habitat for red tree voles. The remains of one red tree vole was identified from a pellet (regurgitated prey remains) of a northern spotted owl that nested within the project corridor, indicating that red tree voles could occur in the study area. Alternative E3 could impact red tree voles by removing nests and killing individuals during construction.

5.3.3 Alternative J1T

Alternative J1T could affect two special-status species, white-tailed kite and yellow warbler. Compared with other alternatives, Alternative J1T would adversely affect an intermediate number of special-status species known to occur in the project area.

White-Tailed Kite

The white-tailed kite is not listed federally or by the state as threatened or endangered. However, it is a California fully protected species. White-tailed kite nests are usually located in trees in riparian and oak woodland habitats. They forage for small rodents in open grassland and agricultural habitats. White-tailed kites were observed nesting in Little Lake Valley.

Alternative J1T would have direct impacts on one existing white-tailed kite nesting territory, and could affect other territories that could be established in the future. In addition, Alternative J1T would affect important foraging habitat from this breeding territory.

California Yellow Warbler

Alternative J1T would cause indirect impacts on at least one existing California yellow warbler nesting territory. This alternative would remove 3.4 ha (8.4 ac) of mixed riparian woodland, 3.2 ha (7.9 ac) of oak riparian woodland, and 1.7 ha (4.2

ac) of scrub riparian habitat, which constitute suitable yellow warbler nesting habitat. Compared with other alternatives, Alternative J1T would cause intermediate impacts on riparian habitats preferred by yellow warblers.

5.3.4 Alternative LT

One special-status bird species, yellow-breasted chat, could be impacted by Alternative LT. Alternative LT would have the fewest impacts to wildlife and would affect a lower number of species than any other alternative.

Yellow-Breasted Chat

One existing yellow-breasted chat nesting territory could be directly affected and at least one additional existing nesting territory could be indirectly affected by construction of Alternative LT. This alternative would remove 5.5 ha (13.7 ac) of mixed riparian woodland, 1.5 ha (3.7 ac) of oak riparian woodland, and 0.3 ha (0.7 ac) of scrub riparian habitat, which provide suitable nesting habitat for yellow-breasted chat. Compared with the other alternatives, Alternative LT would remove an intermediate amount of riparian habitats used by yellow-breasted chat.

5.3.5 Alternatives C1T, J1T, LT: Designated Borrow Site

The removal of 12 to 16 ha (30 to 40 ac) of mixed north slope forest at the designated borrow site for fill material could adversely affect two special-status species, Northern spotted owl and red tree vole.

Northern Spotted Owl

The excavation activities in the Oil Well Hill area would occur within approximately 500 feet of a Northern spotted owl breeding territory that was active in 1992. Although no nesting activity has been detected in recent years, the removal of 12 to 16 ha (30 to 40 ac) of potential nesting and/or foraging habitat could be a significant adverse impact because of the difficulty in reestablishing forested habitat that provides suitable nesting and foraging habitat for Northern spotted owls.

Red Tree Vole

Excavation in the Oil Well Hill area could adversely affect red tree voles that occur in the general vicinity of the project area. The remains of one red tree vole was found in a Northern spotted owl pellet (regurgitated prey remains) at a nesting territory located in the project area, indicating that red tree voles could occur in the project site.

Adverse impacts to red tree voles could include the removal of red tree vole nests and the direct injury or death of individual tree voles.

5.4 Special-Status Fish

Three salmonid species occur in the project area, chinook salmon (California coastal evolutionarily significant unit [ESU], coho salmon (Southern Oregon/Northern California ESU), and the steelhead (Northern California ESU). All three species are listed federally as threatened; and are California species of special concern. All three species enter the project area via the Eel River and Outlet Creek. All three species spawn in creeks that have channel bottoms consisting of clean, relatively loose gravel; and young will remain in the natal streams for up to a year before migrating to the ocean.

The coho salmon occurring in the project area spawn from December through January. Important stream subreaches used by coho salmon for spawning include the upper reaches of Broaddus and Baechtel Creeks.

The steelhead occurring in the project area spawn from December through March. The upper reaches of Baechtel, Mill and Haele Creeks have historically maintained steelhead spawning activity and are important stream segments for the development of young steelhead.

The chinook salmon occurring in the project area spawn from December though March. Stream reaches historically important for chinook salmon spawning include the upper reaches of Broaddus, Mill, Haele and Davis Creeks.

5.4.1 Alternative C1T

Alternative C1T would require five crossings of stream subreaches identified for fisheries analysis, including one over Haehl Creek, three over Mill Creek, and one over Outlet Creek. Approximately 275 m (900 ft) of upper Haehl Creek would be realigned along the southern portion of the alignment; and approximately 400 m (1,300 ft) of Mill Creek, and 1,600 m (5,250 ft) of Outlet Creek bordering the eastern edge of the Northwest Pacific Railroad tracks would be realigned at the northern portion of Little Lake Valley (Table H-5-3). This alternative is located in the valley, where stream gradients are lower, and the quality of potential spawning habitat for

salmonids is lower. Outlet Creek, however, is an essential migratory corridor for the federal-listed coho salmon, chinook salmon, and steelhead, and provides access to other streams and tributaries in Little Lake Valley.

The risk of soil erosion is low for the southern portion of the C1T alignment, but is higher for the northern portion of this alignment, due to the proposed creek alignments and impacts to riparian vegetation associated with the creeks (approximately 7.6 ha (18.7 ac). A focused study in the Little Lake Valley also found that reduced canopy cover was directly related to increases in water temperatures (Caltrans 2000). Hence, the removal of large segments of riparian vegetation could reduce habitat quality by increasing stream temperatures. This type of impact would be significant along Outlet Creek, due to its importance as the primary migratory corridor for salmonids moving to the other streams and tributaries in the Little Lake Valley watershed. Because of the extensive realignment of Mill and Outlet Creeks, riparian vegetation removal, and the potential for increases in sedimentation and temperature, impacts associated with Alternative C1T on fish migratory patterns and habitat quality are considered adverse.

Table H-5-3. Willits Bypass Major Creek Corridor Roadway Impact Assessment Summary: Fisheries Resources

Creek Corridor	C1T	E3	J1T	LT
South Segments (nodal analysis)				
Upper Haehl**	Realignment [275 m (902 ft)], culvert w/ natural bottom, 2 culverts removed	Realignment [880 m (2886 ft)], bridge, 2 culverts removed bridge (2nd crossing)	realignment [275 m (902 ft)], culvert w/ natural bottom, 2 culverts removed	realignment [275 m (902 ft)], culvert w/ natural bottom, 2 culverts removed
Lower Haehl*			bridge	
Baechtel*		bridge	viaduct	
Broaddus*		bridge	viaduct	
Outlet*	Viaduct			viaduct
Mill/Willits*	Viaduct	bridge	viaduct	viaduct
Upp**		bridge		
North Segments (nodal analysis)				
Mill/Willits*	culvert (2nd crossing) realignment (400 m) bridge (3rd crossing)			
Upp**			bridge	bridge
Wild Oat	Culvert	bridge		
Outlet*	Realignment (1600 m)	bridge		
Total crossings	6 crossings	8 crossings	6 crossings	4 crossings
Total realignment	2275 m (7464 ft)	880 m (2886 ft)	275 m (902 ft)	275 m (902 ft)
% of alignment traversing highly erosive soils***	7	85	38	23

* creeks with known anadromous fish usage (coho, chinook, and steelhead)
** creeks with historic anadromous fish usage (chinook and steelhead)
*** review of soil survey maps and length of alignment within highly erosive soil areas

5.4.2 Alternative E3

Alternative E3 would require seven crossings over streams identified for fisheries analysis and bridge construction on upstream reaches of Haehl, Baechtel, Broaddus, Mill, Upp, and Outlet Creeks and could potentially affect downstream reaches from increases in sedimentation. The majority of potentially affected stream reaches is located in the foothills above Little Lake Valley and contains important habitat for anadromous species. This alternative would directly affect the upper reaches of Baechtel, Broaddus, and Mill creeks. These reaches are important spawning and rearing areas for coho and chinook salmon and steelhead trout. In addition, tributaries upstream of the alternative construction footprint, including Willits Creek and segments of Mill, Broaddus, and Baechtel Creeks, support salmonid populations that could be indirectly affected in the short term as a result of construction activities that inhibit spawning migration (Table H-5-3).

Alternative E3 would have the greatest impacts to salmonids resulting from potential project-related erosion, relative to the other alternatives. The proposed alternative would directly impact or degrade 3.6 ha (8.9 ac) of riparian habitat (Table H-5-1), most of which is along Haehl Creek due to channel realignment. Soil disturbance associated with the cut-and-fill slopes at the stream crossings would have the potential of soil sedimentation during storm events.

The impacts on fish habitat and the distribution and abundance of fish associated with Alternative E3 are considered extensive because a high potential for permanent impacts to fish populations and suitable salmonid habitat resulting from the proposed stream crossings, and the potential for increased erosion from project related activities.

5.4.3 Alternative J1T

Alternative J1T would require six crossings of streams identified for fisheries analysis, on Haehl, Baechtel, Broaddus, Mill, and Upp Creeks. The stream crossings would directly affect the lower reaches of Baechtel, Broaddus, and Mill creeks, which contain important habitat for salmonids. However, they would be located farther downstream from the high quality spawning habitat located in the upper reaches of these streams, and thus would have less severe effects on salmonids because of the smaller amount of high-quality habitat exposed to sedimentation impacts. The affected reaches under this alternative are located near the Little Lake Valley floor,

and pass through residential areas of the City of Willits. Hence, they are characterized by lower habitat quality (e.g., less habitat complexity due to less extensive riparian vegetation) than reaches located upstream in the foothills. Nonetheless, these reaches are important for fish migration and rearing.

The proposed Alternative J1T would collectively impact or degrade approximately 4.0 ha (9.9 ac) of riparian habitat. Soil disturbance from the cut-and-fill slopes would have the potential of sedimentation during storm events. The lower habitat values in the downstream reaches, below the proposed Alternative E3, suggests that potential impacts to fish distribution and abundance would be less than for Alternative E3. The quantity of sediments that could enter the streams due to erosion and lineal extent of habitat impacts occurring in Alternative J1T would be less than this alternative than for Alternatives E3 and C1T. The greatest impact to fish populations and habitat quality associated with Alternative J1T would be the number of stream crossings (six) and the potential for sedimentation of downstream reaches.

5.4.4 Alternative LT

Alternative LT would require four crossings of streams identified for fisheries analysis and bridge construction on Haehl, Outlet, Mill, and Upp Creeks (Table H-5-3). The stream crossings proposed for this alignment would be located primarily in valley locations. Habitat values would be similar to those occurring in Alternative J1T. Construction of this alternative would remove or degrade approximately 7.3 ha (18.1 ac) of riparian habitat (Table H-5-1).

Alternative LT would likely cause less erosion than Alternatives C1T and E3, and would have impacts similar to Alternative J1T.

5.4.5 Alternatives C1T, J1T, LT: Designated Borrow Site

Excavation at the designated borrow site for fill material would not directly affect any streams that support fish. However, indirect impacts to fisheries could result from construction related sediments that could enter Outlet Creek.

5.5 Indirect And Cumulative Effects To Aquatic Resources And Sensitive Species

In addition to assessing the direct impacts to wetland resources and associated sensitive species, potential indirect and cumulative effects require assessment. These effects include any future federal and non-federal actions that may occur in the project area. Indirect and cumulative effects analyses are typically difficult to assess due to the lack of information on potential future development in the area, and the absence of intensive surveys of biological resources in the areas of potential development. Hence, this analysis uses the best available information to provide an estimation of the potential indirect and cumulative effects that could result from construction of the proposed Willits Bypass. For this analysis, the area of indirect and cumulative effects considered includes the immediate community of Willits, Little Lake Valley and the surrounding foothills. This area was selected because it is the area that would be most influenced by the Bypass and is within the same watershed.

Projects considered in this analysis included: 1) proposed bypass alternatives that potentially have growth inducing effects; 2) a proposed second access into the Brooktrails residential development; 3) the proposed expansion of the City's wastewater treatment facility; and 4) areas of potential industrial development.

Because all of the Willits Bypass alternatives are proposed as controlled access freeways, growth-inducing effects would be minimized. The southern interchange for each of the freeway alternatives is designed for through traffic, which would minimize access to the freeway. Alternative E3 is the only alternative that has a direct link to S.R. 20 west of Willits, and that would provide an interchange at S.R. 20. Because of the location of the S.R. 20 interchange west of City of Willits, there is the potential for growth inducing effects (e.g., service stations, restaurants, etc.) around that proposed interchange location. Because of limited wetland resources in the S.R. 20 corridor and because the aquatic resources in the vicinity of Alternative E3 are confined to Broaddus Creek, potential indirect impact would be minimal.

The Brooktrails community is planning for a second access road to its residential development, which may be located near Wild Oat Canyon. Potential impacts to wetlands here would occur near lower Wild Oat Canyon, on the valley floor along U.S. 101. Because this access road would cut through the foothills along the western side of Little Lake Valley, there would be greater impacts to upland habitats.

The City of Willits is proposing expansion of its wastewater treatment facility. Because of the location of the existing facility on the valley floor, any expansion would directly impact wetland resources. Because of the relatively small size of expanding the facility, the cumulative impacts may not be significant.

As identified in the Willits City Plan, areas zoned for industrial development occur in the area of East Hill Road, in the City of Willits. Alternative J1T would remove a newly established business park along East Hill Road, which would likely be relocated in the immediate vicinity. Other existing industrial development occurs in this area and it is anticipated that development would continue to occur in this portion of Willits. This development would likely have impacts to wetland resources.

Because most of the projects in the area occur near the City of Willits, or primarily at upland locations, indirect and cumulative effects to wetland resources would likely be less than adverse. Also, since most of the higher quality wetland areas occur in the central and northern portion of Little Lake Valley and along Outlet Creek, these areas would largely remain in agricultural use, thus minimizing the potential for development in these large intact areas.

5.6 Other Environmental Resources/Project Elements

The Section 404 (b)(1) Alternatives Analysis specifically addresses project-related effects to aquatic resources and associated sensitive species. To be "practicable," the alternative chosen: 1) must meet the projects purpose and need; 2) must be able to be constructed within estimated reasonable cost estimates; 3) must be technically feasible, and 4) should not create other unacceptable consequences, such as severe operation or safety problems, or socioeconomic or other non-aquatic environmental impacts (e.g., Section 4(f) properties). When considering the effects to other resources, wetland effects take precedence when assessing impacts prior to mitigation, while other environmental effects are evaluated by the "net harm" after mitigation.

This section summarizes other project elements (e.g., costs, purpose and need) and environmental resource impacts (e.g., cultural resources, farmlands, socioeconomic) by each of the alternatives under consideration. Table H-5-4 provides a matrix of impacts to other environmental resources by each of the proposed alternatives. These

data also are provided in Section 5 (Environmental Consequences) of the Draft EIR/EIS.

Table H-5-4. Willits Bypass Section 404 (b)(1) Alternatives Analysis Matrix

Project Elements/Environmental Resource	Alternative C1T		Alternative E3		Alternative J1T		Alternative LT		No Build
Meets Project's Purpose and Need	yes		yes		yes		yes		**no**
Level of Service (regional Freeway facility)	C+		C+		C+		C+		**F**
Constructability	high		high		high		high		n/a
Highway Connectivity w/101 and Local Service	moderate		moderate-low		high		high		n/a
Potential Growth Inducing	low		high		low		low		n/a
	South	**North**	**South**	**North**	**South**	**North**	**South**	**North**	
Project Costs (millions $)	43 borrow material: 19	65	93	**208**	38 borrow material: 20	93	38 borrow material: 25	67	--
Cultural Resources Sites	1	2	**11**	7	1	2	1	2	--
Farms/Williamson Act parcels (ha/ac)	23/58	38/96	47/116	12/30	14/34	6/16	21/52	6/16	--
Farmland Conversion Impact Rating	153.2		188.0		136.4		155.6		
Farmland, Prime and Unique (ha/ac)	**53.2/131.4**		**56.3/139.1**		24/59		24.9/61.5		
Home/Business Displacement									
Residential	3	--	**106**	8	8	5	2	5	--
Business	--	--	18	1	16	4	1	4	--
Geology (erosion/slip out potential)	low	low	**high**	**high**	low	moderate	low	moderate	low
Water Quality	moderate	**high**	**high**	**high**	moderate	moderate	moderate	moderate	low
Hazardous Waste (# of sites)	0	0	0	0	**4**	0	0	0	0
Floodplain Enroachment	moderate	**high**	low	low	low	low	moderate	moderate	low
Biological Resources:									
Listed/Proposed Species	5		4		5		5		--
Species of Concern	4		5		3		3		--
Baker's meadowfoam (pop. size / ha)	**10,300 / 0.2**	**33,700 / 1.2**	--	--	2,000 / 1.4	**33,200 / 0.2**	--	**33,200 / 0.2**	--
Waters of US/Wetland Impacts (ha)	**23.3**	**30.0**	5.1	1.0	9.5	11.6	**18.1**	11.3	--
Fisheries (crossings/channel realignment)	3 / 275 m	**4 / 1500 m**	**6 / 880 m**	2 / --	5 / 275 m	3 / --	3 / 275 m	1 / --	5 existing
Natural Habitat/Wildlife Fragmentation	moderate	**high**	**high**	**high**	low	moderate	moderate	low	low
Habitat Impact (ha):									
oak woodland	1.6	--	**19.3**	3.4	1.3	--	1.6	--	--
riparian (wetland and upland)	7.4	**13.8**	3.0	0.6	6.3	2.0	4.9	0.8	--
Anticipated Mitigation Success*	low		moderate		high		moderate		n/a

* anticipated success of mitigation in replacing impacted habitats/species and is based on the magnitude of impact and amount of replacement habitat needed

** includes 6 individual mini-storage units

6 Section 404 (b)(1) Alternatives Analysis (to determine the LEDPA)

6.1 ALTERNATIVES C1T, E3, AND NO BUILD

Alternatives C1T, E3, and the No Build alternatives do not meet the LEDPA (least environmentally damaging practicable alternative), as required under Section 404 (b)(1) Guidelines.

6.1.1 No Build Alternative

As required, the No Build alternative is included to provide an objective evaluation of all alternatives and to provide a baseline for comparison of impacts of the proposed build alternatives. This alternative would maintain U.S. 101 in its existing location, with the current facility being used as both an interregional through route and the main street of the City of Willits. Although this alternative would have no impact to wetland resources, traffic is projected to increase in the future, based on regional transportation demands, which would result in continued delays and increased safety concerns in the City of Willits. Therefore, the No Build alternative would not alleviate the current and projected traffic demand and safety concerns within the City of Willits, and would not meet the projects purpose and need.

6.1.2 Alternative C1T

Alternative C1T has the greatest impact to wetland resources, encompassing approximately 53.3 ha (131.2 ac), as well as the greatest impact to listed anadromous fish and critical habitat for anadromous fish. The northern segment of Alternative C1T would require the realignment of approximately 400 m (1,300 ft) of Mill Creek, and 1,600 m (5,250 ft) of Outlet Creek on the east side of the railroad tracks, which are aquatic resources essential to three listed anadromous fish. These reaches are also designated as critical habitat for the listed coho and chinook salmon. Modifying these stream reaches by channel realignments would remove riparian vegetation that has the potential to significantly affect these species, both directly and indirectly, by degrading water quality (e.g., increased water temperatures and sedimentation).

Wetland impacts associated with Alternative C1T are approximately two to three times greater than for Alternatives J1T and LT (approximately 21.1 to 29.4 ha [52.4 to 72.8

ac]. Alternatives LT and J1T have considerably less wetland impact and no stream realignments that would affect critical habitat for salmonids. Although Alternatives LT and J1T would have more socioeconomic impacts (i.e., to residences along existing U.S. 101), the magnitude of wetland impact and net harm to biological resources after mitigation to the residences (i.e., relocation assistance) is difficult to justify. The northern segment of Alternative C1T has one of the largest impacts to special-status plants, including Baker's meadowfoam, a state-listed rare plant species.

The southern segment of Alternative C1T also has the largest impact to wetland resources compared to the equivalent segments for Alternatives LT and J1T, which have few other environmental consequences that could be viewed as unacceptable. The southern segment of Alternative C1T also extends furthest east into Little Lake Valley, which would be subject to greater habitat fragmentation. Because both segments of Alternative C1T have the largest impacts to wetland and aquatic resources, and associated sensitive species, compared to other practicable alternatives, Alternative C1T would not meet the LEDPA. Also, Alternative C1T would convert 53.2 ha (131.4 ac) of prime farmland to other uses, compared to 24 ha (59 ac) for Alternative J1T and 24.9 ha (61.5 ac) for Alternative LT. Alternative C1T would result in removal of 13.8 ha (34 ac) of riparian habitat that benefits a number of special status wildlife (California yellow warbler, yellow breasted chat, foothill yellow-legged frog, northwestern pond turtle, chinook salmon, coho salmon, and steelhead.

6.1.3 Alternative E3

Alternative E3 would result in the least impact to wetland resources of the remaining build alternatives (6.1 ha [15.1 ac]). This alternative meets the project's purpose and need; however, it is the most expensive and has several other environmental drawbacks. This alternative costs $301 million, which is approximately 2.5 times more than budgeted for this project (Table H-5-4). Alternative E3 requires the greatest realignment of upper Haehl Creek (880 m). Alternative E3 has the greatest impact to residences (114 units), which would require relocation assistance, and there are few areas in the Willits area to relocate these residences, and no other communities are within a reasonable distance for relocation. Alternative E3 traverses the largest extent of the surrounding foothills that are mostly classified by the soil survey as having high erosion rates. Although Best Management Practices would be implemented for all of the selected alternatives, cutting and filling in these highly erodible soils would have the greatest potential for short-term construction related residual sedimentation, as well as long-term sedimentation from

possible slip outs, slumps, and landslides that could enter downstream waters. This could have indirect effects to anadromous fish resources, including three federal-listed fish species, in downstream reaches. Alternative E3 would also have the greatest impact to upland/foothill habitats, including oak woodland (22.7 ha [56.1 ac]), and encroaches into relatively undisturbed habitats west of Willits resulting in extensive habitat fragmentation. Also, Alternative E3 would convert 56.3 ha (139.1 ac) of prime farmland to other uses, compared to 24 ha (59 ac) for Alternative J1T and 24.9 ha (61.5 ac) for Alternative LT. As the result of the many environmental consequences and excessive costs, Alternative E3 would not meet the LEDPA.

6.2 ALTERNATIVES LT AND J1T

The alternatives analysis determined that Alternatives E3, C1T, and the No Build alternative, do not meet the LEDPA, because of the extent of unavoidable and unacceptable environmental consequences and, in the case of Alternative E3, the excessive construction costs. Alternatives LT and J1T meet the project's purpose and need because they would have moderate impacts to wetlands, compared to Alternatives E3 and C1T, and fewer environmental impacts to other resources (e.g., socio-economics, cultural resources, prime farmland and fisheries). Of the southern segments, Alternative J1T has fewer wetland impact (9.5 ha [23.5 ac]) than does Alternative LT, which would impact 18.1 ha (44.7 ac). This is due to the proposed longer elevated viaduct proposed for alternative J1T, which is designed to avoid wetlands in the area. Hence, the difference in direct wetland impacts associated with the southern portions of Alternative J1T, when compared to Alternative LT, would be approximately 8.6 ha (21.2 ac) less than Alternative LT. Alternative J1T would result in the conversion of less prime farmland (24 ha [59 ac]) than Alternative LT (24.9 ha [61.5 ac]). Because of the longer viaduct, the cost of Alternative J1T would be greater (approximately $21 million more than Alternative LT) for the equivalent segment. However, with the longer viaduct Alternative J1T would involve less encroachment into the 100-year floodplain than would Alternative LT.

Because Alternative J1T immediately parallels the existing railroad, it would also result in less fragmentation of habitat. Alternative LT would be placed further east in the valley, which would bisect a large oak riparian corridor near Center Valley Road. Alternative J1T would also impact a newly established business park at East Hill Road.

The differences between the southern portions of J1T and LT include:

- Socio-economics: J1T would impact 13 residences compared to 7 in LT; J1T-south would require relocation of a new, occupied business park while LT-south would avoid the business park;

- Costs: J1T would cost approximately $21 million more than LT, due to the longer viaduct and impacts to commercial structures;

- Potential hazardous waste sites: J1T would impact four hazardous waste sites compared to none in LT;

- Floodplain encroachment: LT would place more fill in the floodplain and has a shorter viaduct than alternative J1T;

- Baker's meadowfoam: J1T south would impact a small population of about 2,000 plants, and LT south would impact none);

- Habitat fragmentation: LT would extend further into Little Lake Valley, and would bisect a large area of mixed riparian woodland; and

- Williamson Act farmlands: Alternative LT impacts 7 ha (18 ac) more Williamson Act farmlands (27 ha/68 ac) than Alternative J1T (20 ha/50 ac).

- Prime farmland: Alternative LT would result in the conversion of slightly more prime farmland (24.9 ha [61.5 ac]) than Alternative J1T (24 ha [59 ac]).

At the Quail Meadows Interchange where both alternatives LT and J1T converge, the impacts are similar.

This analysis of the proposed Willits Bypass alternatives identifies either Alternative J1T or Alternative LT as the LEDPA. Following the public comment period and input from the resources and regulatory agencies, the final NEPA preferred alternative/Section 404 LEDPA will be identified in the final EIR/EIS. Based on the preferred alternative/LEDPA, the final design will incorporate measures to minimize impacts to resources within the project limits. In addition, a detailed compensatory mitigation plan(s) will be finalized and approved by the resource agencies for all unavoidable impacts to aquatic resources based on the agreed upon preferred alternative.

7 References

California Department of Transportation. 2000. Supplemental Natural Environment Study Willits Bypass Project. Marysville, CA.

California Natural Diversity Data Base. 1998. Unpublished computerized database reports for Willits region. California Department of Fish and Game. Sacramento, CA.

Environmental Laboratory. 1987. U.S. Army Corps of Engineers wetlands delineation manual. (Technical Report Y-87-1.) U.S. Army Engineers Waterways Experiment Station. Vicksburg, MS.

Gaines, D. 1974. A new look at the nesting riparian avifauna of the Sacramento Valley, California. Western Birds 5:61-80.

Harris, J.H., S.D. Sanders, and M.A. Flett. 1988. The status and distribution of the willow flycatcher in California 1986. (Administrative Report 88-1.) California Department of Fish and Game, Wildlife Management Division. Sacramento, CA.

Holland, R. F. 1986. Preliminary descriptions of the terrestrial natural communities of California. California Department of Fish and Game, Nongame-Heritage Program. Sacramento, CA.

Jones & Stokes Associates, Inc. 1991. Delineation of wetlands and other waters of the United States for the U.S. Route 101 Willits study area. November 25, 1991. (JSA 91-037.) Sacramento, CA. Submitted to California Department of Transportation, District 1, Eureka, CA.

Remsen, J. V., Jr. 1978. Bird species of special concern in California: an annotated list of declining or vulnerable bird species. (Wildlife Management Branch Administrative Report No. 78-1.) California Department of Fish and Game, Wildlife Management Branch, Sacramento, CA.

Sanders, S.D. and M.A. Flett. 1989. Ecology of a Sierra Nevada population of willow flycatchers (*Empidonax traillii*), 1986-1987. Nongame Bird and Mammal Section Report. California Department of Fish and Game. Sacramento, CA.

Skinner, M., and B. Pavlik. 1994. Inventory of rare and endangered vascular plants of California. 5th edition. (Special Publications No. 1.) California Native Plant Society. Sacramento, CA.

Smith, G. L., and C. R. Wheeler. 1991. A flora of the vascular plants of Mendocino County, California. Wasmann Journal of Biology 48 and 49:1-387.

U.S. Fish and Wildlife Service. 1980. Habitat evaluation procedures (HEP). ESM 102. Washington, D.C.

Warner, R. E. 1979. California riparian study program. Background information and proposed study design. California Department of Fish and Game. Sacramento, CA.

Appendix I Section 106 SHPO Concurrence

STATE OF CALIFORNIA – THE RESOURCES AGENCY
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DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
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P33117

GRAY DAVIS, Governor

August 17, 2000

Reply To: FHWA000717A

Michael G. Ritchie, Division Administrator
U.S. Department of Transportation
Federal Highway Administration
California Division
980 Ninth Street, Suite 400
Sacramento, CA 95814-2724

Re: Determinations of Eligibility for the Willits Bypass, Willits, CA

Dear Mr. Ritchie:

You have provided me with the results of your efforts to determine whether the project described above may affect historic properties. You have done this, and are consulting with me, in order to comply with Section 106 of the National Historic Preservation Act and implementing regulations codified at 36 CFR Part 800.

The Federal Highway Administration (FHWA) has identified that 183 properties qualify for treatment under the "Memorandum of Understanding Regarding Evaluation of Post-1945 Buildings, Moved Pre-1945 Buildings, and Altered Pre-1945 Buildings", and the "Interim Guildelines-Post-45 MOU" (MOU). The FHWA has determined that the following properties located in Willits are not eligible for the National Register of Historic Places (NRHP):

- 19907 Highway 101
- 751 East Hill Road
- 22801 Bray Road
- 998 Hearst Willits Road
- 19950 North Highway 101
- 20110 Hollands Lane
- 20518 Highway 101
- 601 Locust Lane
- 23091 and 23881 Sherwood Road
- On SR 20 1.2 miles west of Willits
- 500 Shell Lane
- 24050 Highway 101
- 24500 Highway 101
- 24700 Highway 101
- 24850 Highway 101
- 291 Shell Lane
- 1251 Center Valley Road
- 1150 Center Valley Road
- 1000 Center Valley Road
- 1000A Center Valley Road
- 1001 Center Valley Road
- 27200 North Highway 101
- 1535 Baechtel Road
- 21080 Baechtel Road
- 190 Baechtel Road
- 195 E Oak Avenue
- 180 E Oak Avenue
- 167 E Oak Avenue
- 658 Railroad Avenue
- 562 Railroad Avenue
- 514 Railroad Avenue
- 364 Railroad Avenue
- 376 Railroad Avenue
- 1 Page Court
- 3B Page Court
- 334 Railroad Avenue
- 324 Railroad Avenue
- 96 San Francisco Avenue
- 501 Central Avenue
- 475 Central Avenue
- 549 Central Avenue
- 621 Central Avenue
- 351 Penn Street
- 389 Penn Street
- 349 Penn Street
- 195 California Street
- 235 State Street
- 236 State Street

- 253 State Street
- 258 State Street
- 281 State Street
- 274 State Street
- 296 State Street
- 212 State Street
- 65 Marin Street
- 85 Marin Street
- 21490-21480 Baechtel Road
- 230 Shell Lane
- 97 Baechtel Road
- 119 Baechtel Road
- 135 E Oak Street
- 145 E Oak Street

The FHWA has also determined that the following properties are eligible for the NRHP:

- **Martin Baechtel House**, 21110 Baechtel Road – This house is eligible at a local level of significance under Criterion A for its association with one of the region's pioneers. The house is also eligible under Criterion C for its vernacular Greek Revival architecture, which is unusual for the area. The period of significance in circa 1861, the year the house was built.
- **Samuel Baechtel House**, 187 Baechtel Road – This house is eligible at the local level of significance under Criterion A for its association with one of Willits' pioneers, and also as the last surviving building associated with the first permanent Euro-American settlement in the region. The period of significance is the early 1860s.
- **Northwestern Pacific Railroad** (NWP) – The entire railroad extends from Sausalito in Marin County to the Eureka vicinity in Humboldt County. The NWP is eligible at the state level of significance under Criterion A for its association with the development of the town of Willits, the expansion of the redwood lumber industry resulting from the new railroad link to distant markets, and promotion of tourism in the redwood country. In addition the depot, restaurant building, and baggage building appear to be individually eligible under Criterion C for their unique Craftsmen/Swiss Chalet design and beautifully rendered architectural details. The period of significance for the section in the project area is from 1869 to 1950.
- **California Western Railroad** – The entire line of the railroad is eligible at the state level of significance under Criterion A for its important contribution to the expansion of the redwood lumber industry in Mendocino County and for its stimulation of the tourism industry in the region. The period of significance is 1885 to 1950.
- **Historic District, Block 3 of 1877 Willits Town Plat** – This residential district is bounded on the south by East Valley Street, on the east by Madden Lane, on the north by East Van Street, and on the west by South Humboldt Street. Of the total of eighty-two buildings, eighteen are non-contributors and sixty-six are contributors to the district. The district is a mostly working class residential neighborhood with a large number of well-preserved vernacular Queen Anne cottages and Craftsmen bungalows. These homes reflect the modest incomes of the hundreds of laborers who came to Willits seeking employment in the sawmills and logging camps in the area during the economic boom starting with the arrival of the Northwestern Pacific Railroad in 1901 and ending in the mid-1920s when the largest sawmill in the area closed down. The district is significant at a local level of significance under Criterion A for its association with the growth and expansion of Willits. The period of significance is from 1901-1928.
- **Tee Pee Burner, 101 Redwood, Inc.**, 101 N Main Street – California's tremendous economic expansion following World War II created a boom in construction, and the sawmills of Willits were kept busy keeping up with the increasing demand for building material. The tee pee burner was an important part of any sawmill operation. It was an efficient device for disposing of the flammable waste material produced by the milling process. This tee pee burner is one of the few burners left in Mendocino County, as sawmills tore them down after federal regulations in 1971 identified them as significant contributors to air pollution. The tee pee burner is eligible under Criterion A on a local

level of significance for its association with the lumber industry in the post-war era. The period of significance is 1947-1948, when the burner was first put into service.

Based on review of the submitted documentation, I have the following comments:

1) The Historic Property Survey Report (HPSR) and its attendant documents are adequate.
2) 183 properties were treated under the MOU.
3) The Martin Baechtel House, Samuel Baechtel House, Northwestern Pacific Railroad, California Western Railroad, Block 3 of the 1877 Willits Town Plat historic district, and the Tee Pee Burner are eligible for the NRHP for the reasons listed above.
4) The remaining sixty-two architectural properties that were evaluated in the HPSR are not eligible for the NRHP.

Thank you for considering historic properties during project planning. If you have any questions, please call Natalie Lindquist at (916) 654-0631 or e-mail at nlind@ohp.parks.ca.gov.

Sincerely,

Daniel Abeyta, Acting
State Historic Preservation Officer

Appendix J Relocation Assistance Advisory Service

APPENDIX J. RELOCATION ASSISTANCE ADVISORY SERVICE

BENEFITS PROVIDED TO RELOCATEES PURSUANT TO LAW

The acquisition and relocation program will be conducted in accordance with the **Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.** Relocation resources are available and will be provided to all residential and business relocatees without discrimination.

The Department of Transportation provides relocation advisory assistance to any person, business, farm or non-profit organization displaced as a result of the Department's acquisition of real property for public use. The Department assists displacees in obtaining replacement housing by providing current and continuing information on the availability and prices of houses for sale and rental units that are comparable, "decent, safe and sanitary". Mobile home owner occupants renting space may receive a combination of replacement housing benefits due to owner/tenant status. Non-residential displacees will receive information on comparable properties for lease or purchase.

Residential replacement dwellings will be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are fair housing open to all persons, consistent with the requirements of Title VI of the Civil Rights Act of 1968.

Residential Relocation Payments Program

The Relocation Payment Program will help eligible residential occupants by paying costs and expenses. These cost are limited to those necessary for the purchase or rent of a replacement dwelling and actual reasonable moving expenses to a new location within a 50-mile radius of the displacee's property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Program can be summarized as follows:

Moving Costs

Any displaced person who was lawfully in occupancy of the acquired property regardless of length of occupancy therein, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles, a moving service authorization, or a fixed payment based on a fixed moving cost schedule which is

determined by the number of furnished or unfurnished rooms of the displacement dwelling.

Purchase Supplement

In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners who have owned and occupied their property for 180 days or more prior to the date of the first written offer to purchase the property, may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property.

The price differential payment is made when the Department determines that the cost to purchase a comparable and "decent, safe and sanitary" replacement dwelling will be more than the present cost of the displacement dwelling. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate. The maximum amount of supplemental payment that the owner-occupants can receive is $22,500.00. If the total entitlement (without moving payments) is in excess of $22,500.00, the Last Resort Housing Program (LRHP) will be used.

Rental Supplement

Tenants who have occupied the property to be acquired by the Department for 90 days or more and owner-occupants of 90 days or more prior to the date of the first written offer to purchase, may qualify to receive a rental differential payment. This payment is made when the Department determines that the cost to rent a comparable and decent, safe and sanitary replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property. Once the eligibilities are determined, occupants of the residential care home will be eligible for tenant relocation benefits and their individual needs will be considered. The maximum amount payment to any tenant of 90 days or more and any owner-occupant of 90 days or more, in addition to moving expenses, will be $5,250.00. If the total entitlement for rental supplement exceeds $5,250.00, LRHP will be used.

Last Resort Housing

The State Department of Transportation, adopted federal guidelines for implementing the LRHP. Last resort housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard relocation as explained above. LRHP has been designed primarily to cover situations

where comparable replacement housing is unavailable, or when their anticipated replacement housing payments exceed the $5,250.00 and $22,500.00 limits of the standard relocation procedures. In certain exceptional situations, LRHP may also be used for tenants of less than 90-days.

After the first written offer to acquire the property has been made, the Department will, within a reasonable length of time, personally contact the displacees to gather important information relating to:

- Preferences in area of relocation;
- Number of people to be displaced and the distribution of adults and children according to age and sex;
- Location of school and employment;
- Special arrangements to accommodate any handicapped member of the family;
- Financial means to relocate into comparable replacement dwelling which is decent, safe and sanitary.

The Business and Farm Relocation Assistance Program

The Business and Farm Relocation Assistance Program provides for aid in locating suitable replacement property, and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program can provide, when requested, a current list of properties offered for sale or rent, suitable for specific relocation needs.

The types of payments available to businesses, farms and non-profit organizations can be summarized as follows:

Moving expenses include the following actual reasonable costs:

The moving of inventory, machinery, office equipment and similar business-related personal property dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property.

Loss of tangible personal property provides payment to relocatee for "actual direct" losses of personal property that the owner elects not to move.

Expenses related to searching for a new business site can be reimbursed up to $1,000.00 for actual reasonable cost incurred.

Reestablishment expenses up to $10,000.00 relating to the new business operation.

In lieu payment (instead of the above payments). Payment "in Lieu" of moving and reestablishment expenses is available to businesses and farms which are assumed to

suffer a substantial loss of existing patronage as a result of the displacement, or if certain other requirements such as inability to find a suitable relocation site are met.

This payment is an amount equal to the average annual net earnings for the last 2 taxable years prior to relocation. Such payment may not be less than $1,000.00 and not more than $20,000.00.

Additional Information

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954, or sources for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act, local Section 8 housing programs, or other federal assistance programs.

Persons whom are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without being given at least 90 days advance notice, in writing. Occupants of any type of dwelling eligible for relocation payments will not be required to move unless at least one comparable "decent, safe and sanitary" replacement residence, open to all persons, regardless of race, color, religion, sex or national origin is available, or has been made available to them by the State.

Any persons, business, farm or nonprofit organization which has been refused a relocation payment by the Department of Transportation, or believes that the payments are inadequate, may appeal for a special hearing of the complaint. No legal assistance is required, however, the displacee may choose to obtain legal council, but at their own expense. Information about the appeal procedure is available from Department of Transportation relocation advisors.

The information above is not intended to be a complete statement of all the Department's laws and regulations. At the time of the first written offer to purchase, owner-occupants are given a more detailed explanation of the State's relocation services. Tenant occupants of properties to be acquired are contacted immediately after the first written offer to purchase, and also given a more detailed explanation of the Department's relocation programs.

Important Notice

To avoid loss of possible benefits, no individual, family, business, farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Department of Transportation Relocation Advisor at:

State of California
Department of Transportation, District 3
2800 Gateway Oaks Dr.
Sacramento, CA 95833
(916) 274-5809

Appendix K Willits Bypass Newsletters

A number of Willits newsletters have been issued during the project development process to keep the public informed about the status of the project and related studies. Following is the most recent Willits Bypass newsletter.

CALTRANS

Connection

NEWSLETTER FOR THE WILLITS BYPASS PROJECT

WINTER 2001

Status of the Draft EIR/EIS

Caltrans completed the Willits Bypass Administrative draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) in June 2001 and sent it to the Federal Highway Administration (FHWA) for its review. The document includes two volumes. Volume 1 is the text describing the alternatives under consideration and the impacts associated with those alternatives. Volume 2 is an Environmental Atlas containing all the detailed maps for the document at 11"x 17" size.

We have received preliminary comments from FHWA and are modifying the document to address comments received to date. However, the document cannot be completed until formal comments are received. We anticipate public circulation to begin early next year.

The draft EIR/EIS will be available for public review at Mendocino County Libraries and at the Caltrans District Office in Eureka. We will also place the document on the Willits Bypass webpage (see address below) for public review and comment. Copies of the document will be sent to the organizations and individuals who have requested copies.

A public "Open House" style meeting on the draft EIR/EIS will be held in Willits. A notice of availability and the date of the public meeting will be published concurrently with distribution of the draft EIR/EIS. Comments may be made on the draft EIR/EIS either at the public meeting or in writing before the end of the 60-day comment period. For a hard copy or compact disk of the draft EIR/EIS, send your request to:

California Department of Transportation
Caltrans Office of Environmental Management S-1
2800 Gateway Oaks Drive, Suite 100
Sacramento, CA 95833
Attn: Nancy MacKenzie, Environmental Coordinator

After the comment period, a preferred alternative will be selected based on comments received and an evaluation of the impacts. The final EIR/EIS presents the preferred alternative and identifies the impacts and mitigation measures for that alternative.

Valley Alternatives are Truncated

In early 2001, Caltrans proposed shortening, or truncating, the three valley alternatives to conform more closely to existing funding. The truncated valley Alternatives; C1T, J1T and L1T now end just north of their northerly interchanges and tie into existing U.S. 101 north of the Willits City limits.

Approximately $117 million is currently programmed for construction and right of way for the Willits Bypass. Construction (including right of way) cost estimates for the three truncated valley alternatives range from $128 to $151 million. In addition to their

reduced cost, the truncated valley alternatives meet the project purpose and need on the newly constructed freeways, and these alternatives will function well as "stand alone" alternatives into the future.

To provide flexibility in selecting a preferred alternative, we employed an evaluation procedure we referred to as a "nodal approach." This approach allows a segment of one alternative to be combined with a segment of another alternative to create a "hybrid alternative." The Alternatives Map shows where the dividing, or nodal, point for each alternative is located. By combining segments of alternatives, there are more possibilities for choosing a preferred alternative.

Alternative E3, the wetland avoidance alternative, has not been truncated. Its location as a western bypass alternative and the geography along its alignment do not lend themselves to shortening or combining with other truncated valley alternatives. Alternative E3 is presented in the draft EIR/EIS and has an estimated cost of $301 million. All four "build" alternatives propose construction of a four-lane freeway with two travel lanes in each direction, a center grass median, and a design speed of 68 mph. For a detailed description of each alternative, please visit our webpage at: **http://www.dot.ca.gov/dist3/departments/planning/willits/willits.htm**

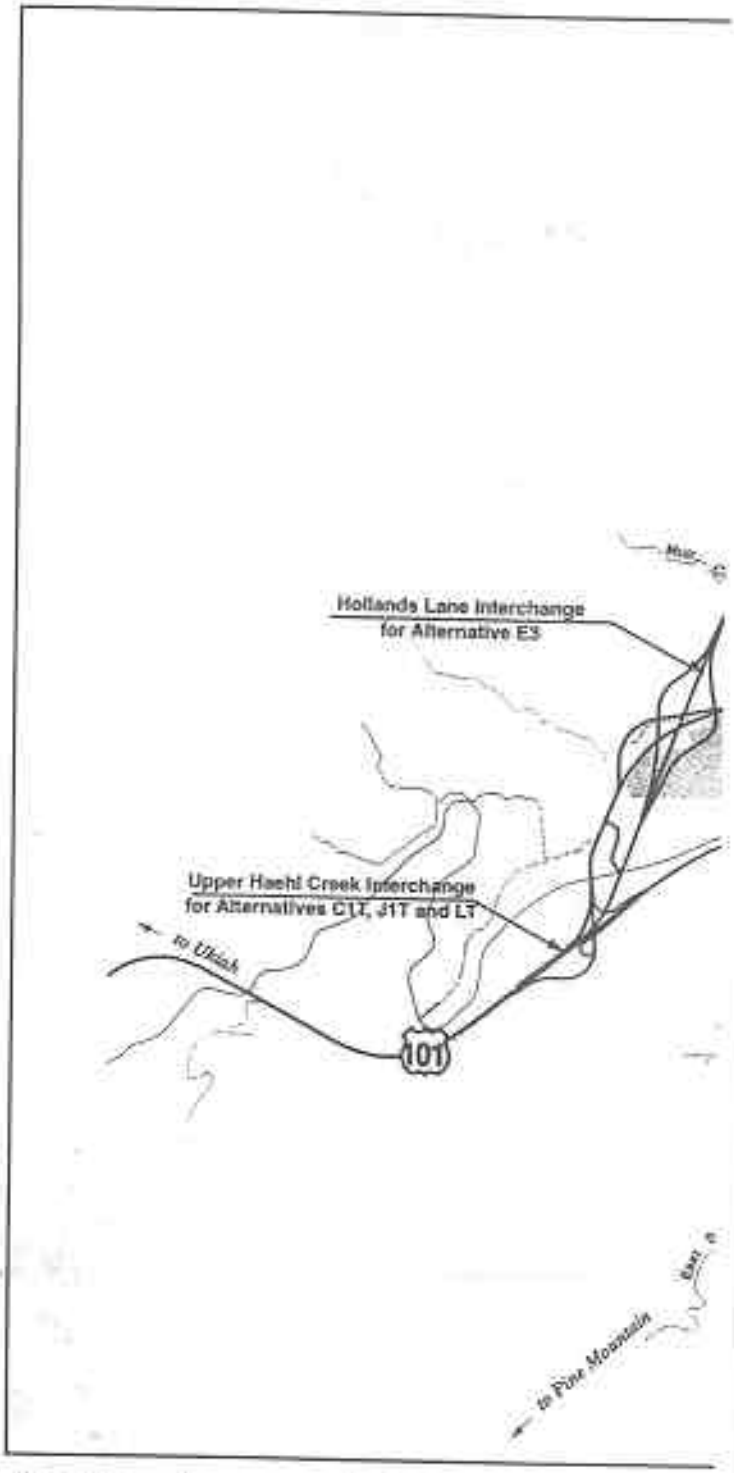
Numerous Technical Studies were prepared for the Draft EIR/EIS

During preparation of the draft EIR/EIS, Caltrans staff and consultants prepared numerous technical studies to evaluate impacts associated with the proposed alternatives. The Historic Properties Survey Report is one of the studies prepared to evaluate cultural resources including historic architecture and pre-historic sites. The Transportation History of Willits insert was written by our Caltrans Architectural Historian and summarizes some of the research he completed to evaluate the historic significance of structures in Willits.

Please see the insert "A Transportation History of Willits"

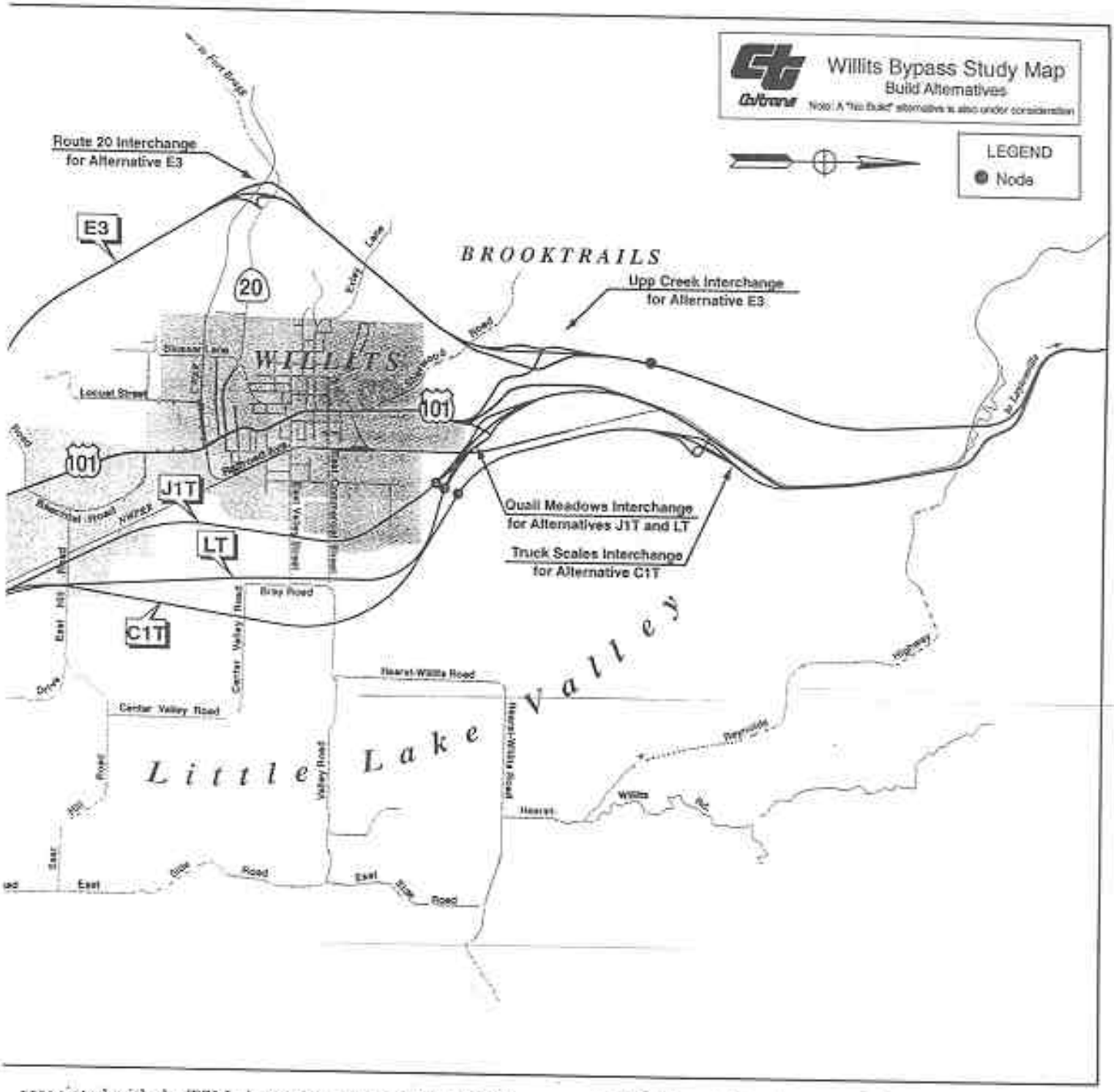
Elimination of the TSM Alternative

During preparation of the draft EIR/EIS, Caltrans Management considered but eliminated the Transportation System Management (TSM) alternative because it did not meet the project purpose and need. The TSM alternative would have operated as an arterial parallel to existing U.S. 101 and would have provided the least delay reduction of all the study alternatives. In addition, Alternative TSM was not expected to reduce the number



of collisions when compared with the No Build Alternative. The freeway study alternatives, however, are expected to provide a substantial reduction in collisions. Finally, the level of service provided by the TSM Alternative was not consistent with the level of service provided by the freeway alternatives.

Because of interest expressed by community members and a Project Development Team resource agency representative, Caltrans committed to fully studying the TSM alternative in the many technical studies developed to prepare the draft EIR/EIS. These studies revealed the significance of the environmental and community impacts



associated with the TSM alternative. The TSM alternative had the greatest impact to community housing stock. The alternative resulted in the removal of 140 residential units, including 104 single-family homes, 15 multi-family units and 21 mobile homes. In addition, 28 commercial, industrial, and non-profit businesses would have been relocated. There is not sufficient housing stock in Willits for the large number of residents who would have been displaced by the TSM alternative.

The TSM alternative was the only build alternative that resulted in unavoidable adverse impacts to eligible historic access in the vicinity. These impacts would likely have modified the existing character of the area. Finally, the alternative also had the potential to physically divide the community of Willits and conflicted with the City's goal to provide a "livable, walkable" community.

Design and layout by District 3 Multimedia

A Transportation History of Willits

Winter 2001

by Frank Lortie, Caltrans Cultural and Community Studies Office

The first non-Native Americans who came to the Willits-Little Lake Valley area passed through here in the early 1850s, on horseback and on foot, on their way north to the new settlement of Eureka and the mines of the Trinity Mountains. Travelers returning to the San Francisco Bay Area told of the rich lands and redwood forests in the region. The first permanent settlement of the Willits region is credited to Samuel, Martin and Henry Baechtel. In 1855, the three brothers drove a herd of cattle from Marin County to Little Lake Valley with the intention of setting up their own farms in the fertile valley. By 1861, a frontier settlement, called Little Lake, had been created at the southwest corner of Little Lake Valley and was located on Sam Baechtel's ranch. The village had a store and trading post, a saloon, and a public hall. When the Baechtel brothers first entered the area and for decades afterward, the rugged mountains around Little Lake Valley and its remoteness from the major population centers to the south thwarted rapid settlement in this part of Mendocino County. These transportation barriers kept Willits from the economic expansion and influx of population early settlers had been hoping for. Consequently, Willits and Little Lake Valley grew slowly during the last part of the 1800s.

By the time Hiram Willits laid out the town site of Willitsville in 1877, about a mile north of the Baechtel ranch, Mendocino County had built a public road connecting Ukiah with the settlements at Little Lake Valley. Apparently, the road followed the alignment of former U.S. 101, now Walker Road, after it crossed the Ridgewood Summit. But it turned where Baechtel Road branches off the highway today and proceeded past Martin Baechtel's house and through the center of Little Lake Village and in front of Samuel Baechtel's ranch house (both Baechtel houses are still there today). The old road then turned northward on to Willitsville's Main Street. Slow growth did not mean no growth for Willits (it shortened its name in the 1880s), and regular stagecoach service and frequent deliveries by freight wagons from Ukiah allowed improved, but limited, access to markets in the outside world. By the end of the 1880's, Willits, with a population of around 400, offered a full array of retail establishments and public services for the resident and traveler alike. Still, products from local farmers and sawmill operators were confined to regional markets, which did not allow much room for growth.

All this changed in 1902 when, with much fanfare, the first train of the Northwestern Pacific Railroad (a subsidiary of the Southern Pacific Railroad since 1900) arrived in Willits. Now that there was a reliable and efficient means for transporting large quantities of redwood lumber to the San Francisco Bay Area, local sawmills could

expand their capacities and cut much more lumber than could be consumed locally. As an indication of the important connection between the railroad and lumber production, several of the owners of the Northwestern Redwood Company, based in Willits, were on the board of directors of the NWP Railroad. Passenger traffic was also important for the NWP, and by the 1910s it offered regularly scheduled trains for Bay Area visitors to the Willits area. In 1912, the Union Lumber Company finished its railroad, the California Western, linking Fort Bragg with Willits and the NWP. Now as much a "railroad town" as a lumber town, Willits had become the commercial and transportation hub of northern Mendocino County. The beautiful 1916 redwood railroad station on Commercial Street (listed on the National Register of Historic Places) is a fitting symbol of Willits' important role in the development of the railroad and the lumber industry in California's northwest.

The decade of the '20s saw a rapid increase in automobile traffic, mostly from the San Francisco Bay Area. Auto courts and other resorts catering to the auto tourists multiplied along the route of the Redwood Highway (today's U.S. 101) from Marin County to Eureka. In 1923, the highway reached the Oregon border. Unfortunately, the economic boom of the 1920s did not survive to the end of the decade, and Northwestern Redwood Company, along with several other large mills in the region, shut down its operation, probably as a result of over-supply. Also during this time, the State Division of Highways closed its District 1 office in town and moved its fifty employees to Eureka (the former office is now the Willits Veterans Building on U.S. 101 just south of the high school). The Great Depression of the 1930s compounded the economic problems of the region as sawmills and businesses closed their doors, and ultimately only two sawmills (both on the coast) were able to keep operating until the outbreak of World War II.

Wartime construction at military facilities and around defense plants brought full production to Willits' lumber industry, and the post-war boom in housing and commercial construction kept Mendocino County sawmills busy into the 1960s. The trucking industry, which had been expanding steadily in the 1930s, now had become an essential factor in the redwood lumber business, and the NWP Railroad started to feel the effects as its revenues declined sharply. The California Western railroad also suffered from the competition but was able to compensate for this by running regular excursion trains through the spectacular scenery of the mountains between Fort Bragg and Willits. Tourism had become an essential industry for Willits after the war, and the continuing improvements to U.S. 101, combined with the post-war economic boom, encouraged thousands of motorists from all over northern California to vacation in the Redwood Country.

From the 1920s to the 1950s, U.S. 101 passed through the major towns along its route in Sonoma, Mendocino, and Humboldt Counties. The highway was also the Main Street of those communities. The economic benefits derived from the expansion of the tourist trade and the increase in truck traffic on U.S. 101 were being offset by the problems of traffic congestion on the highway once it entered a town's commercial center. As the freeway era progressed from the mid-1950s through the 1970s, drivers came to expect a fast, convenient, uninterrupted trip on the state's super-highways. So the delay motorists and truckers faced in the towns on the U.S. 101 corridor, especially during the summer months, increased demands for some relief.

Bypassing the Main Streets was seen as the solution, and over the years, large sections of the highway from Marin County to the Oregon border were rerouted around town commercial centers to expedite traffic flow and improve safety. Some town merchants and residents feared that a bypass would hurt local business and encroach upon farmlands on the town's fringes. Others welcomed the bypass as a rescue from the traffic jams on "Main Street" and as an inducement for suburban development outside the town's old historic core. Historically, most highway projects involve some controversy, and bypass proposals are no exception.

WILLITS BYPASS NEWSLETTER

P.O. BOX 3700
EUREKA, CA 95502

Caltrans

If you would like to be added to our mailing list
please fill out the form below and mail to:

CALTRANS
Program/Project Management
P.O. Box 3700
Eureka, CA 95502

PLEASE ADD ME TO THE
WILLITS BYPASS NEWSLETTER
MAILING LIST

Name _____

Street _____

City/State _____

Zip Code _____

Appendix L Farmland Conversion Impact Rating Form And Williamson Act Contract Lands Summary of Impacts

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request 3/29/01	4. Sheet 1 of 1
1. Name of Project: Willits Bypass	5. Federal Agency Involved: Federal Highway Administration	
2. Type of Project: Freeway Bypass	6. County and State: Mendocino, CA	
PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS	2. Person Completing Form
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES [X] NO [ ]	4. Acres Irrigated: 24,716	Average Farm Size: 585 AC
5. Major Crop(s): GRAPES, PEARS, HAYLAND	6. Farmable Land in Government Jurisdiction: Acres: 94,039 % 4	7. Amount of Farmland As Defined in FPPA: Acres: 94 039 %4
8. Name Of Land Evaluation System Used: ONLE, STORIE INDEX	9. Name of Local Site Assessment System: NONE	10. Date Land Evaluation Returned by NRCS

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment			
	Corridor C1T	Corridor E-3	Corridor J1T	Corridor LT
A. Total Acres To Be Converted Directly	242	713	209	226
B. Total Acres To Be Converted Indirectly, Or To Receive Services	40	161	91	89
C. Total Acres In Corridor	282	874	300	315
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	131.4	139.1	59.0	61.5
B. Total Acres Statewide And Local Important Farmland	* 0	0	0	0
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	.47	.15	.20	.20
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	DATA NOT AVAILABLE			
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*	56.2	78	40.39	58.6
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))* — Maximum Points				
1. Area in Nonurban Use — 15	9	15	9	9
2. Perimeter In Nonurban Use — 10	8	10	7	8
3. Percent Of Corridor Being Farmed — 20	15	15	15	15
4. Protection Provided By State And Local Government — 20	20	20	20	20
5. Size of Present Farm Unit Compared To Average — 10	0	0	0	0
6. Creation Of Nonfarmable Farmland — 25	15	20	15	15
7. Availability Of Farm Support Services — 5	5	5	5	5
8. On-Farm Investments — 20	5	5	5	5
9. Effects Of Conversion On Farm Support Services — 25	10	10	10	10
10. Compatibility With Existing Agricultural Use — 10	10	10	10	10
TOTAL CORRIDOR ASSESSMENT POINTS — 160	# 97	# 110	# 96	# 97
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland (From Part V) — 100	56.2	78.0	40.39	58.6
Total Corridor Assessment (From Part VI above or a local site assessment) — 100	# 97.0	# 110	# 96	# 97
TOTAL POINTS *(Total of above 2 lines)* — 260	# 153.2	# 188	# 136.4	# 155.6

1. Corridor Selected	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
			YES [ ] NO [ ]

5. Reason For Selection:

* MENDOCINO COUNTY HAS NOT GONE THRU LOCAL IMP. FARMLAND PROCESS

Signed: Thomas Schott (FOR MS DC)
Thomas Schott, NRCS

Signature of Person Completing this Part: | DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

Summary of Impacted Williamson Act Contract Lands

Alternative C-1(T) North					
APN#	PARCEL #	Total Acres	Sq. meters	ha	Acres of Take
108-030	02	48.8	131365.12	13.14	16.31
108-010	03	82.68	123182	12.32	30.44
108-020	04	155.0	131365.12	13.14	32.46
108-040**	03	125.0	48109.00	4.81	11.89
108-040**	08	41.0	19875.10	1.99	4.91
Total			388523.118	**38.9**	**96.0**
Alternative C-1(T) South					
APN#	PARCEL #	Total Acres	Sq. meters	ha	Acres of Take
103-130	01	78.0	48969.44	4.90	12.10
103-110	01	80.0	39300.29	3.93	9.71
103-070	03	17.8	20091.72	2.01	4.96
104-090	04	12.0	4496.55	0.45	1.11
104-070	05	38.6	6531.61	0.65	1.61
108-040**	03	125.0	97844.81	4.89	12.09
108-040**	08	41.0	19875.10	1.995	2.46
Total			237109.52	**23.7**	**58.6**
Alternative E-3 North					
APN#	PARCEL #	Total Acres	Sq. meters	ha	Acres of Take
037-160*	27	70.0	8228.85	0.82	2.03
037-240	19	7.0	15944.8	1.59	3.94
038-020	06	160.0	93814.22	9.38	23.18
108-010	01	53.5	3986.8	0.40	0.99
Total			121974.67	**12.2**	**30.1**
Alternative E-3 South					
APN#	PARCEL #	Total Acres	Sq. meters	ha	Acres of Take
007-240	01	39.1	51369.26	5.14	12.69
007-240	02	40.0	66838.97	6.68	16.52
007-260	03	80.0	1980.2	.1980	.49
038-020	07	160.0	11393.5	1.14	2.82
038-020	42	78.8	19295.7	1.93	4.77
038-020	43	78.7	5361.38	0.54	1.32
038-130	20	80.0	120992.71	12.10	29.90
038-130	47	48.8	67609.97	6.76	16.71
038-130	40	40.0	28494.61	2.85	7.04
038-130	48	11.2	42512.54	4.25	10.50
038-130	38	420.0	40873.21	4.09	10.10
038-130	52	157.5	846.00	0.08	0.21
038-140	07	11.84	13760.83	1.38	3.40
Total			471328.88	**47.1**	**116.5**

Alternative J1(T) North					
APN#	PARCEL #	Total Acres	Sq. meters	ha	Acres of Take
108-040**	08	41.0	66940	6.69	16.54
Total			184154.7374	**6.7**	**16.5**
Alternative J1(T) South					
007-050	02	27.43	44993.42	4.50	11.12
007-050	03	40.0	42468.79	4.25	10.49
007-070	01	71.5	41800.44	4.18	10.33
104-070	05	38.6	6512.23	0.65	1.61
104-090	04	12.0	4667.68	0.47	1.15
Total			140442.56	**14.0**	**34.70**
Alternative L(T) North					
APN#	PARCEL #	Total Acres	Sq. meters	ha	Acres of Take
108-040**	08	41.0	67741	6.77	16.74
Total			67741	**6.8**	**16.7**
Alternative L(T) South					
APN#	PARCEL #	Total Acres	Sq. meters	ha	Acres of Take
007-050	01	71.5	2757.6	0.28	0.68
007-070	03	40.0	39382.07	3.94	9.73
103-110	01	80.0	36461.2	3.65	9.01
103-130	01	78.0	26749.44	2.67	6.61
104-070	05	38.6	5707.86	0.57	1.41
104-090	04	12.0	5029.045	0.50	1.24
108-040	03	125.0	41956.266	4.20	10.37
108-040**	08	41.0	55549.93	5.55	13.73
Total			213593.411	**21.4**	**52.8**

*Designated as a Timber Protection Zone (TPZ).

**Parcel split by nodal segmentation.

Appendix M Noise Impact Summary

Under Federal/FHWA regulations (23 CFR 772) and Caltrans' policy, noise abatement must be considered when the project results in a noise impact. An evaluation of reasonable and feasible abatement measures must be included in the draft environmental document. This appendix contains a summary of this process:

- First, predicting future noise and analyzing the impact for each receptor (Table M-1),
- Second, analyzing the feasibility of soundwalls where there is a noise impact (Table M-2), and
- Third, evaluating the reasonableness of each feasible soundwall (Table M-2).

Existing noise and predicted noise increases for each alignment are shown in Table M-1. The "Predicted Noise Level Leq(h), dBA" is shown for the No-Build Alternative (Column 3) and for each build alternative (Column 4). If this "Predicted Noise Level" approaches (by 1 dBA) or exceeds the Noise Abatement Criteria (Column 2), there is an impact (Column 6). Also, an impact occurs if there is a noise increase that exceeds 12 dBA, Leq(H) (Column 5). The receptor locations listed in this table are shown on Map 23B in the atlas (Volume II). The noise levels were calculated based on peak-hour traffic projections for all the alternatives under consideration, including the no-build alternative.

Table M-2 is a summary of impacted receptors and the feasibility and reasonableness of soundwall abatement for these impacted receptors.

For a soundwall to be feasible, it must reduce noise by at least 5 dB. Also, locations that would be outside the construction limits of any alternative and locations that may be considered for purchase by the state for the proposed project, were eliminated from further analysis. Columns 4 and 8 summarize the feasibility of soundwalls for each impacted receptor.

For each impacted receptor where a soundwall was feasible, the reasonableness of the soundwall was evaluated. A soundwall was considered feasible only for receptors 73, 74, and 75, so the evaluation continued, to determine whether a soundwall was reasonable for these three receptors. The conclusion was that a soundwall for these receptors did not meet the reasonableness criteria (Column 9).

Table M-1 shows existing noise levels and the results of noise modeling for the future build under each project alternative (2028). Where the noise levels approach or exceed the noise abatement criteria, noise abatement was analyzed. Where there was a substantial noise increase noise abatement/mitigation was also analyzed.

Table M-1. Predicted Traffic Noise Impacts

1	2	3	4	5	6
Receptor I.D. No.[2]	Activity Category And NAC Leq(h)	Predicted Noise Level Leq(h), dBA	Predicted Noise Level Leq(h), dBA Year 2028	Noise Increase (+) or Decrease (-)	Impact Type[1] (S, A/E, CR or None)
Alternative C1T					
		Existing	Alternative C1T		
1	B (67)	46	50	+4	None
2	B (67)	47	54	+7	None
3	B (67)	44	59	+15	S
4	B (67)	41	54	+13	S
5	B (67)	49	52	+3	None
6	B (67)	57	58	+1	None
7	B (67)	62	62	--	None
8	B (67)	53	54	+1	None
9	B (67)	56	56	--	None
10	B (67)	55	55	--	None
11	B (67)	68	68	--	A/E
12	B (67)	71	70	-1	A/E
13	B (67)	64	64	--	None
14	B (67)	62	62	--	None
15	B (67)	68	67	-1	A/E
16	B (67)	47	48	+1	None
20	B (67)	51	53	+2	None
23	B (67)	47	48	+1	None
24	B (67)	45	45	--	None
25	B (67)	44	44	--	None
26	B (67)	45	45	--	None
27	B (67)	44	44	--	None
28	B (67)	48	48	--	None
29	B (67)	58	58	--	None
30	B (67)	58	59	+1	None
31	B (67)	49	51	+2	None
34	C (72)	47	49	+2	None
62	B(67)	50	50	--	None
63	B (67)	52	52	--	None
67	B (67)	51	55	+4	None
68	B (67)	56	56	--	None
69	B (67)	50	52	+2	None
72	B (67)	52	55	+3	None
73	B (67)	63	63	--	None

Table M-1. Predicted Traffic Noise Impacts

1	2	3	4	5	6
Receptor I.D. No.[2]	Activity Category And NAC Leq(h)	Predicted Noise Level Leq(h), dBA	Predicted Noise Level Leq(h), dBA Year 2028	Noise Increase (+) or Decrease (-)	Impact Type[1] (S, A/E, CR or None)
Alternative C1T					
		Existing	Alternative C1T		
74	B (67)	63	64	+1	None
75	B (67)	59	60	+1	None
76	B (67)	58	74	+16	S
77	B (67)	50	60	+10	None
80	B (67)	64	60	-4	None
81	B (67)	67	65	-2	None
82	B (67)	66	64	-2	None
83	B (67)	66	65	-1	None
84	B (67)	59	59	--	None
85	B (67)	61	60	-1	None
86	B(67)	65	64	-1	None
87	B(67)	61	60	-1	None
89	B(67)	66	65	-1	None
90	B(67)	61	60	-1	None
91	C(72)	62	62	--	None
92	B(67)	66	66	--	A/E
93	B(67)	48	48	--	None
94	B(67)	55	55	--	None
95	B(67)	50	50	--	None
96	B(67)	60	60	--	None
97	B(67)	50	50	--	None
98	B(67)	50	50	--	None
99	B(67)	49	49	--	None
100	B(67)	49	49	--	None
101	B(67)	45	45	--	None
102	B(67)	45	45	--	None
103	B(67)	44	44	--	None
104	B(67)	45	45	--	None
105	B(67)	50	50	--	None
106	B(67)	50	50	--	None
107	B(67)	40	40	--	None
Alternative E3					
		Existing	Alternative E3		
1	B (67)	46	50	+4	None
2	B (67)	47	54	+7	None
3	B (67)	44	52	+8	None
4	B (67)	41	46	+5	None
5	B (67)	49	52	+3	None
6	B (67)	57	61	+4	None
7	B (67)	62	62	--	None
8	B (67)	53	55	+2	None

Table M-1. Predicted Traffic Noise Impacts

1	2	3	4	5	6
Receptor I.D. No.[2]	Activity Category And NAC Leq(h)	Predicted Noise Level Leq(h), dBA	Predicted Noise Level Leq(h), dBA Year 2028	Noise Increase (+) or Decrease (-)	Impact Type[1] (S, A/E, CR or None)
Alternative E3					
		Existing	Alternative E3		
9	B (67)	56	57	+1	None
10	B (67)	55	56	+1	None
11	B (67)	68	67	-1	A/E
12	B (67)	71	69	-2	A/E
13	B (67)	64	67	+3	A/E
14	B (67)	62	66	+4	A/E
15	B (67)	68	68	--	A/E
16	B (67)	47	60	+13	S
20	B (67)	51	51	--	None
23	B (67)	47	52	+5	None
24	B (67)	45	52	+7	None
25	B (67)	44	49	+5	None
26	B (67)	45	48	+3	None
27	B (67)	44	51	+7	None
28	B (67)	48	56	+8	None
29	B (67)	58	59	+1	None
30	B (67)	58	58	--	None
31	B (67)	49	49	--	None
34	C (72)	47	46	-1	None
62	B(67)	50	51	+1	None
63	B (67)	52	52	--	None
67	B (67)	51	52	+1	None
68	B (67)	56	57	+1	None
69	B (67)	50	50	--	None
72	B (67)	52	52	--	None
73	B (67)	63	63	--	None
74	B (67)	63	63	--	None
75	B (67)	59	59	--	None
76	B (67)	58	58	--	None
77	B (67)	50	50	--	None
80	B (67)	64	63	-1	None
81	B (67)	67	66	-1	A/E
82	B (67)	66	66	--	A/E
83	B (67)	66	65	-1	None
84	B (67)	59	62	+3	None
85	B (67)	61	62	+1	None
86	B(67)	65	64	-1	None
87	B(67)	61	61	--	None
89	B(67)	66	64	-2	None
90	B(67)	61	60	-1	None
91	C(72)	62	64	+2	None

Table M-1. Predicted Traffic Noise Impacts

1	2	3	4	5	6
Receptor I.D. No.[2]	Activity Category And NAC Leq(h)	Predicted Noise Level Leq(h), dBA	Predicted Noise Level Leq(h), dBA Year 2028	Noise Increase (+) or Decrease (-)	Impact Type[1] (S, A/E, CR or None)
Alternative E3					
		Existing	Alternative E3		
92	B(67)	66	66	--	A/E
93	B(67)	48	56	+8	None
94	B(67)	55	55	--	None
95	B(67)	50	58	+8	None
96	B(67)	60	64	+4	None
97	B(67)	50	50	--	None
98	B(67)	50	51	+1	None
99	B(67)	49	53	+4	None
100	B(67)	49	55	+6	None
101	B(67)	45	46	+1	None
102	B(67)	45	46	+1	None
103	B(67)	44	45	+1	None
104	B(67)	45	60	+15	S
105	B(67)	50	59	+9	None
106	B(67)	50	55	+5	None
107	B(67)	40	59	+19	S
Alternative J1T					
		Existing	Alternative J1T		
1	B (67)	46	52	+6	None
2	B (67)	47	55	+8	None
3	B (67)	44	60	+16	S
4	B (67)	41	55	+14	S
5	B (67)	49	53	+4	None
6	B (67)	57	60	+3	None
7	B (67)	62	64	+2	None
8	B (67)	53	56	+3	None
9	B (67)	56	58	+2	None
10	B (67)	55	57	+2	None
11	B (67)	68	70	+2	A/E
12	B (67)	71	72	+1	A/E
13	B (67)	64	66	+2	A/E
14	B (67)	62	64	+2	None
15	B (67)	68	69	+1	A/E
16	B (67)	47	50	+3	None
20	B (67)	51	55	+4	None
23	B (67)	47	49	+2	None
24	B (67)	45	45	--	None
25	B (67)	44	44	--	None
26	B (67)	45	45	--	None
27	B (67)	44	44	--	None
28	B (67)	48	48	--	None

Table M-1. Predicted Traffic Noise Impacts

1	2	3	4	5	6
Receptor I.D. No.[2]	Activity Category And NAC Leq(h)	Predicted Noise Level Leq(h), dBA	Predicted Noise Level Leq(h), dBA Year 2028	Noise Increase (+) or Decrease (-)	Impact Type[1] (S, A/E, CR or None)
Alternative J1T					
		Existing	Alternative J1T		
29	B (67)	58	58	--	None
30	B (67)	58	60	+2	None
31	B (67)	49	59	+10	None
34	C (72)	47	63	+16	S
62	B(67)	50	53	+3	None
63	B (67)	52	56	+4	None
67	B (67)	51	57	+6	None
68	B (67)	56	58	+2	None
69	B (67)	50	51	+1	None
72	B (67)	52	52	--	None
73	B (67)	63	63	--	None
74	B (67)	63	64	+1	None
75	B (67)	59	59	--	None
76	B (67)	58	58	--	None
77	B (67)	50	50	--	None
80	B (67)	64	65	+1	None
81	B (67)	67	65	+1	None
82	B (67)	66	65	-1	None
83	B (67)	66	65	-1	None
84	B (67)	59	58	-1	None
85	B (67)	61	60	-1	None
86	B(67)	65	65	--	None
87	B(67)	61	61	--	None
89	B(67)	66	65	-1	None
90	B(67)	61	61	--	None
91	C(72)	62	62	--	None
92	B(67)	66	66	--	A/E
93	B(67)	48	48	--	None
94	B(67)	55	55	--	None
95	B(67)	50	50	--	None
96	B(67)	60	60	--	None
97	B(67)	50	50	--	None
98	B(67)	50	50	--	None
99	B(67)	49	49	--	None
100	B(67)	49	49	--	None
101	B(67)	45	45	--	None
102	B(67)	45	45	--	None
103	B(67)	44	44	--	None
104	B(67)	45	45	--	None
105	B(67)	50	50	--	None
106	B(67)	50	50	--	None

Table M-1. Predicted Traffic Noise Impacts

1	2	3	4	5	6
Receptor I.D. No.[2]	Activity Category And NAC Leq(h)	Predicted Noise Level Leq(h), dBA	Predicted Noise Level Leq(h), dBA Year 2028	Noise Increase (+) or Decrease (-)	Impact Type[1] (S, A/E, CR or None)
107	B(67)	40	40	--	None
Alternative LT					
		Existing	Alternative LT		
1	B (67)	46	51	+5	None
2	B (67)	47	55	+8	None
3	B (67)	44	60	+16	S
4	B (67)	41	56	+15	S
5	B (67)	49	53	+4	None
6	B (67)	57	60	+3	None
7	B (67)	62	64	+2	None
8	B (67)	53	56	+3	None
9	B (67)	56	58	+2	None
10	B (67)	55	57	+2	None
11	B (67)	68	70	+2	A/E
12	B (67)	71	72	+1	A/E
13	B (67)	64	66	+2	A/E
14	B (67)	62	64	+2	None
15	B (67)	68	69	+1	A/E
16	B (67)	47	50	+3	None
20	B (67)	51	53	+2	None
23	B (67)	47	49	+2	None
24	B (67)	45	45	--	None
25	B (67)	44	45	+1	None
26	B (67)	45	45	--	None
27	B (67)	44	45	+1	None
28	B (67)	48	48	--	None
29	B (67)	58	58	--	None
30	B (67)	58	59	+1	None
31	B (67)	49	52	+2	None
34	C (72)	47	52	+3	None
62	B(67)	50	55	+5	None
63	B (67)	52	59	+7	None
67	B (67)	51	57	+6	None
68	B (67)	56	58	+2	None
69	B (67)	50	52	+2	None
72	B (67)	52	55	+3	None
73	B (67)	63	71	+8	A/E
74	B (67)	63	71	+8	A/E
75	B (67)	59	68	+9	A/E
76	B (67)	58	61	+3	None
77	B (67)	50	56	+6	None
80	B (67)	64	70	+6	A/E
81	B (67)	67	65	-2	None
82	B (67)	66	65	-1	None
83	B (67)	66	65	-1	None
84	B (67)	59	58	-1	None
85	B (67)	61	61	--	None
86	B(67)	65	65	--	None

Table M-1. Predicted Traffic Noise Impacts

1	2	3	4	5	6
Receptor I.D. No.[2]	Activity Category And NAC Leq(h)	Predicted Noise Level Leq(h), dBA	Predicted Noise Level Leq(h), dBA Year 2028	Noise Increase (+) or Decrease (-)	Impact Type[1] (S, A/E, CR or None)
Alternative LT					
		Existing	Alternative LT		
87	B(67)	61	61	--	None
89	B(67)	66	66	--	A/E
90	B(67)	61	61	--	None
91	C(72)	62	62	~	None
92	B(67)	66	66	--	A/E
93	B(67)	48	48	--	None
94	B(67)	55	55	--	None
95	B(67)	50	50	--	None
96	B(67)	60	60	--	None
97	B(67)	50	50	--	None
98	B(67)	50	50	--	None
99	B(67)	49	49	--	None
100	B(67)	49	49	--	None
101	B(67)	45	45	--	None
102	B(67)	45	45	--	None
103	B(67)	44	44	--	None
104	B(67)	45	45	--	None
105	B(67)	50	50	--	None
106	B(67)	50	50	--	None
107	B(67)	40	40	--	None

[1] Impact Type: S = Substantial Increase (12 dBA or more)
A/E = Approach or Exceed NAC
CR = Classroom Noise (Section 216 of Streets and Highways Code)

2 See Map 23B for location of receptors. Receptor I.D. Numbers that are missing were from alternatives that are no longer under consideration.

Table M-2 is a summary of impacted receptors and the feasibility and reasonableness of soundwall abatement for these impacted receptors. A soundwall was considered feasible only for receptors 73, 74, and 75. The conclusion was that a soundwall for these receptors did not meet the reasonableness criteria (Column 9).

Table M-2. Summary of Impacts and Feasibility of Sound wall Abatement

1	2	3	4	5	6	7	8	9
Modeling Receptor I.D. No.	**Alternate C1T**				**Alternate LT**			
	Impact[1]	No. of Units	Sound wall Feasible	Sound wall Reasonable	Impact[1]	No. of Units	Sound wall Feasible	Sound wall Reasonable
3	Yes	1	No[4]	--	Yes	1	No[4]	--
4	Yes	3	No[4]	--	Yes	3	No[4]	--
11	Yes	1	No[5]	--	Yes	1	No[5]	--
12	Yes	9	No[5]	--	Yes	9	No[5]	--
13	No	--	--	--	Yes	6	No[5]	--
14	No	--	--	--	No	--	--	--
15	Yes	6	No[5]	--	Yes	6	No[5]	--
16	No	--	--	--	No	--		--
73	No	--	--	--	Yes	2	Yes	No[3]
74	No	--	--	--	Yes	2*	Yes	No[3]
75	No	--	--	--	Yes	2	Yes	No[3]
76	Yes	4	No[2]	--	No	--	--	--
80	No	--	--	--	Yes	2	No[2]	--
81	No	--	--	--	Yes	3	No[2]	--
82	No	--	--	--	No	--	--	--
83	No	--	--	--	No	--	--	--
84	No	--	--	--	No	--	--	--
85	No	--	--	--	No	--	--	--
86	No	--	--	--	No	--	--	--
87	No	--	--	--	No	--	--	--
89	No	--	--	--	Yes	13	--	--
90	No	--	--	--	No	--	--	--
91	No	--	--	--	No	--	--	--
92	Yes	1	No[5]	--	Yes	1	No[5]	--
100	No	--	--	--	No	--	--	--
104	No	--	--	--	No	--	--	--
105	No	--	--	--	No	--	--	--
107	No	--	--	--	No	--	--	--
Total of Impacted Units		25				51		

Table M-2. Summary of Impacts and Feasibility of Sound wall Abatement - Continued

1	2	3	4	5	6	7	8	9
Modeling Receptor I.D. No.	**Alternate J1T**				**Alternate E3**			
	Impact[1]	No. of Units	Sound wall Feasible	Sound wall Reasonable	Impact[1]	No. of Units	Sound wall Feasible	Sound wall Reasonable
3	Yes	1	No[4]	--	No		--	--
4	Yes	3	No[4]	--	No		--	--
11	Yes	1	No[5]	--	Yes	1	No[2]	--
12	Yes	9	No[5]	--	Yes	9	No[2]	--
13	Yes	6	No[5]	--	Yes	6	No[2]	--
14	No	--	--	--	Yes	1	No[2]	--
15	Yes	6	No[5]	--	Yes	6	No[2]	--
16	No	--	--	--	Yes	7	No[2]	--
73	No	--	--	--	No	--	--	--
74	No	--	--	--	No		--	--
75	No	--	--	--	No		--	--
76	No	--	--	--	No		--	--
80	No	--	--	--	No		--	--
81	No	--	--	--	Yes	3	No[2]	--
82	Yes	1	No[2]	--	Yes	1	No[2]	--
83	No	--	--	--	No	--	--	--
84	No	--	--	--	No		--	--
85	No	--	--	--	No		--	--
86	No	--	--	--	No		--	--
87	No	--	--	--	No		--	--
89	No	--	--	--	No	--	--	--
90	No		--	--	No		--	--
91	No	--	--	--	No	--	--	--
92	Yes	1	No[5]	--	Yes	1	No[5]	--
100	No	--	--	--	No	--	--	-
104	No	--	--	--	Yes	4	No[4]	--
105	No	--	--	--	No	--	--	--
107	No	--	--	--	Yes	1	No[4]	--
Total of Impacted Units		28				42		

Notes: 1 If the noise level at a receptor exceeds Leq (h) 66 dBA or has a 12 dBA increase, the impact is listed as “yes”.
2 Proposed for state acquisition if this alternative is selected
3 Does not meet reasonableness criteria
4 Can not achieve 5 dBA attenuation.
5 Outside the construction limits – noise levels will remain the same with or without the project.
*Per Section 2.8.3 in the Caltrans Noise Protocol, for every 30.5m (100 ft) of frontage along the soundwall one *receptor unit* will be used.

Appendix N 4(F) Joint Development Planning Documentation

CITY OF WILLITS

CITY HALL – 111 East Commercial Street, (707) 459-4601 • Fax (707) 459-1562
POLICE DEPARTMENT – 125 E. Commercial St., (707) 459-6122 • Fax (707) 459-0405
Willits, CA 95490

April 26, 2001

Cher Daniels, Chief
Office of Environmental Management, S-1
2800 Gateway Oaks Drive, Suite 100
Sacramento, CA 95833

Subject: Willits Bypass - J1T Recreational Impacts

Dear Ms. Daniels:

Attached is the map you requested showing the improvements proposed for the Redwood Empire Railroad History Project planned jointly by the City of Willits and the County of Mendocino. The alignments for the three valley alternatives of the Willits Bypass are also shown on the map.

The Railroad History Project is a multi-phase project that includes construction of several structures to house and display the railroad museum collection, a loop railroad track, and three new ball fields for our community. At the heart of the project is the 20,000-sq. ft. world class exhibition and learning center funded by TEA-21 funds and approved by the Mendocino Council of Governments and the CTC. I am happy to report that we have begun construction on Phase 1 of this project. As we complete the planning process for Phase II, we recognized the need to address potential transportation facilities such as the proposed Willits Bypass J1T Alternative.

The City seeks to find a balanced solution to jointly develop both projects during the planning process. As you are aware, the City of Willits supports a freeway bypass and we have carefully sited the planned Railroad History Project improvements to prevent conflict with all of the proposed alternates, including Alternative J1T. You will see the alignment of Willits Bypass Alternative J1T running through the parcels' eastern portion over constructed wetlands required as mitigation for our project. I understand this segment of alternative J1T is a viaduct so access to the eastern portion of our parcel will be unencumbered. Clearly, the City prefers an alternative further to the east and the Council has proclaimed their support for a combination of Alternatives L at the south and C1 at the north on several occasions. The L-C1 combination alternative would also avoid the San Hedrin industrial park and incorporate a northern interchange near the Truck Scales location.

I appreciate your coordination with our Railroad History Project, our Recreation Field Project, and the planned expansion of our Wastewater Treatment Plant. If I can be of further assistance, please don't hesitate to contact me.

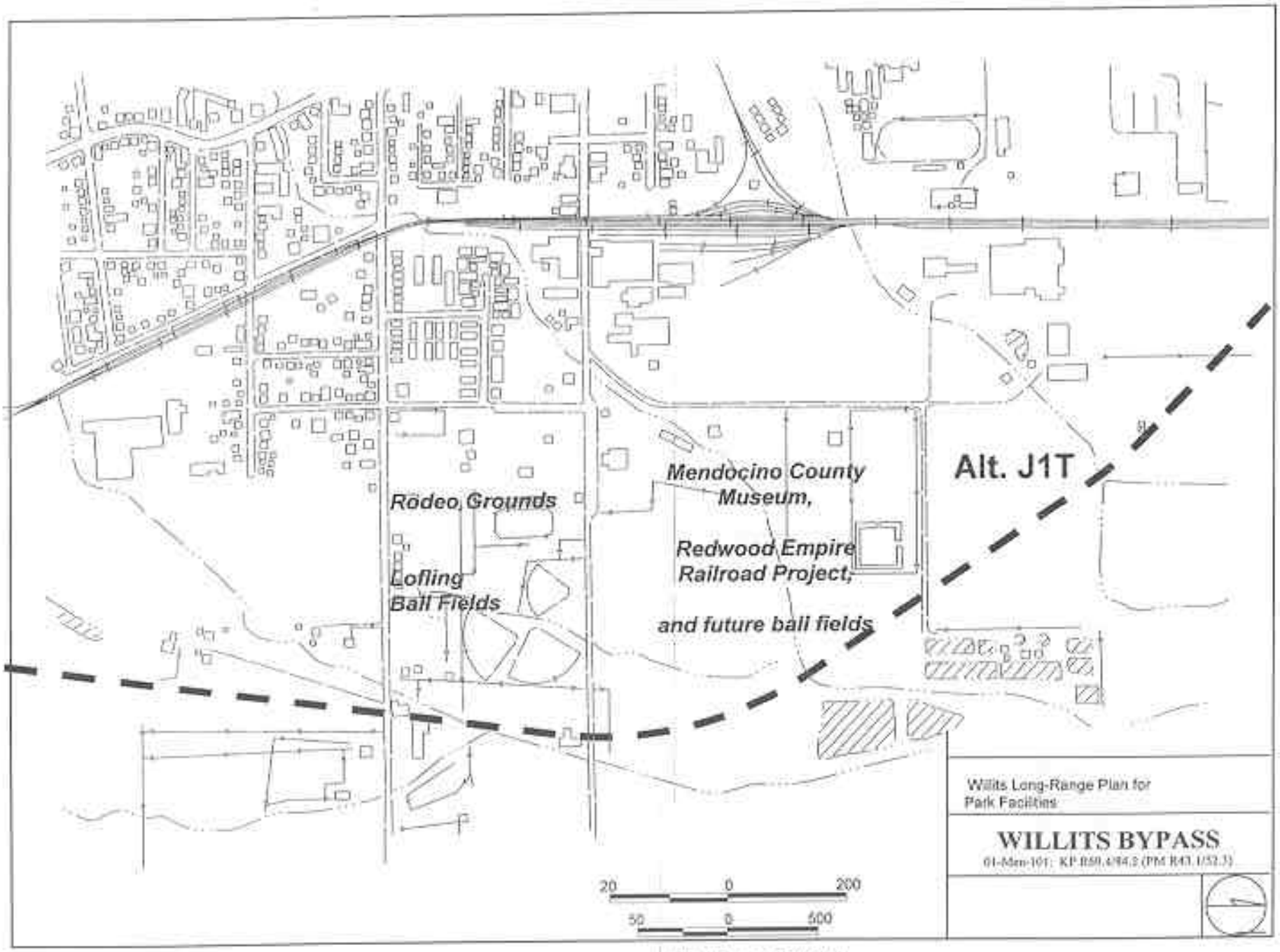
Sincerely,

Gordon Logan
City Manager

GL:tjd

cc: City Council
Lena Ashley, Caltrans Project Manager
Mendocino County Board of Supervisors

enc.


Alt. J1T
Rodeo Grounds
Lofling
Ball Fields
Mendocino County
Museum,
Redwood Empire
Railroad Project,
and future ball fields
20 0 200
50 0 500
Willits Long-Range Plan for
Park Facilities
WILLITS BYPASS

Appendix O USFWS Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arcata Fish and Wildlife Office
1655 Heindon Road
Arcata, CA 95521
(707) 822-7201
FAX (707) 822-8136

IN REPLY REFER TO

1-14-1998-95.4

December 12, 2001

Mr. Chris Collison
Department of Transportation
2800 Gateway Oaks, Suite 130
Sacramento, CA 95833

Subject: Species Lists for Proposed SR 101 Willits Bypass Project, Mendocino County, California

Dear Mr. Collison:

As requested by letter from your agency dated November 26, 2001, you will find enclosed list(s) of endangered and threatened species that may be present in *or may be affected by* projects in the subject project area (see Enclosure A). This list fulfills the requirement of the Fish and Wildlife Service (Service) to provide species lists pursuant to section 7(c) of the Endangered Species Act of 1973, as amended (Act).

The Service used your map(s) and/or other information to determine the U.S.G.S. 7.5' quadrangle(s) containing the proposed project. The species listed in Enclosure A are those species we believe may occur within, *or be affected by projects within* the Willits, Burbeck, and Laughlin Range quads, where your project is planned.

Some of the species listed in Enclosure A may not be affected by the proposed action. A trained biologist or botanist, familiar with the habitat requirements of the listed species, should determine whether these species or habitats suitable for these species may be affected by the proposed action.

Some pertinent information concerning the distribution, life history, habitat requirements, and published references for the listed species is available upon request. This information may be helpful in preparing the biological assessment for this project, if one is required. Please see Enclosure B for a discussion of the responsibilities Federal agencies have under section 7(c) of the Act and the conditions under which a biological assessment must be prepared by the lead Federal agency or its designated non-Federal representative.

Formal consultation, pursuant to 50 CFR § 402.14, should be initiated if you determine that a listed species may be affected by the proposed project. If you determine that a proposed species

may be adversely affected, you should consider requesting a conference with our office pursuant to 50 CFR § 402.10. Informal consultation may be utilized prior to a written request for formal consultation to exchange information and resolve conflicts with respect to a listed species. If a biological assessment is required, and it is not initiated within 90 days of your receipt of this letter, you should informally verify the accuracy of these lists with our office.

Candidate species are currently being reviewed by the Service and are under consideration for possible listing as endangered or threatened. The term *candidate* now strictly refers to species for which the Service has on file enough information to propose listing. Candidate species have no protection under the Endangered Species Act, but are included for your consideration as it is possible that one or more of these candidates could be proposed and listed before the subject project is completed. Should the biological assessment reveal that candidate species may be adversely affected, you may wish to contact our office for technical assistance. One of the potential benefits from such technical assistance is that by exploring alternatives early in the planning process, it may be possible to avoid conflicts that could otherwise develop, should a candidate species become listed before the project is completed.

If the proposed project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by the U.S. Army Corps of Engineers (Corps), a Corps permit shall be required, pursuant to section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act. Impacts to wetland habitats require site specific mitigation and monitoring. You may request a copy of the Service's General Mitigation and Monitoring Guidelines or submit a detailed description of the proposed impacts for specific comments and recommendations.

Please contact Mr. Greg Goldsmith at (707) 822-7201 if you have any questions regarding the attached lists or your responsibilities under the Endangered Species Act. For the fastest response to species list requests, address them to the attention of the species list coordinator at this address. For questions regarding wetlands, please contact Mr. Randy Brown of this office at (707) 822-7201.

Sincerely,

(For) Bruce G. Halstead
Project Leader

Enclosures

Enclosure A

Listed/Proposed Threatened and Endangered Species for BURBECK Quad (Candidates Included)

December 12,2001

TYPE	SCIENTIFIC NAME	COMMON NAME	CATEGORY	CRITICAL HABITAT
Plants				
	Trifolium amoenum	showy Indian clover	E	N
Fish				
	Eucyclogobius newberryi	tidewater goby	E	Y
*	*Oncorhynchus mykiss*	Northern California steelhead	T	N
*	*Oncorhynchus kisutch*	S. OR/N. CA coho salmon	T	Y
*	*Oncorhynchus kisutch*	central CA coast coho salmon	T	Y
*	*Oncorhynchus tshawytscha*	CA coastal chinook salmon	T	Y
Birds				
	Coccyzus americanus	yellow-billed cuckoo	C	N
	Strix occidentalis caurina	northern spotted owl	T	Y
	Brachyramphus marmoratus	marbled murrelet	T	Y
	Haliaeetus leucocephalus	bald eagle	T	N

KEY:

(PE) Proposed Endangered	Proposed (in the Federal Register as being in danger of extinction
(PT) Proposed Threatened	Proposed as likely to become endangered within the foreseeable future.
(E) Endangered	Listed in the Federal Register as being in danger of extinction
(T) Threatened	Listed as likely to become endangered within the foreseeable future.
(C) Candidate	Candidate which may become a proposed species
Critical Habitat	Y = Designated, P = Proposed, N = None Designated

* Denotes a species listed by the National Marine Fisheries Service

Enclosure A

Listed/Proposed Threatened and Endangered Species for LAUGHLIN RANGE Quad (Candidates Included)

December 12,2001

TYPE	SCIENTIFIC NAME	COMMON NAME	CATEGORY	CRITICAL HABITAT
Plants				
	Trifolium amoenum	showy Indian clover	E	N
Fish				
*	*Oncorhynchus kisutch*	central CA coast coho salmon	T	Y
*	*Oncorhynchus tshawytscha*	CA coastal chinook salmon	T	Y
*	*Oncorhynchus mykiss*	Central California steelhead	T	Y
Birds				
	Coccyzus americanus	yellow-billed cuckoo	C	N
	Strix occidentalis caurina	northern spotted owl	T	Y
	Brachyramphus marmoratus	marbled murrelet	T	Y
	Haliaeetus leucocephalus	bald eagle	T	N

KEY:

(PE) Proposed Endangered	Proposed (in the Federal Register as being in danger of extinction
(PT) Proposed Threatened	Proposed as likely to become endangered within the foreseeable future.
(E) Endangered	Listed in the Federal Register as being in danger of extinction
(T) Threatened	Listed as likely to become endangered within the foreseeable future.
(C) Candidate	Candidate which may become a proposed species
Critical Habitat	Y = Designated, P = Proposed, N = None Designated

* Denotes a species listed by the National Marine Fisheries Service

Enclosure B

FEDERAL AGENCIES' RESPONSIBILITIES UNDER SECTIONS 7(a) and (c) OF THE ENDANGERED SPECIES ACT

SECTION 7(a) Consultation/Conference

Requires: (1) federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species; (2) Consultation with FWS when a federal action may affect a listed endangered or threatened species to insure that any action authorized, funded, or carried out by a federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The process is initiated by the federal agency after determining the action may affect a listed species; and (3) Conference with FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat.

SECTION 7(c) Biological Assessment-Major Construction Activity[1]

Requires federal agencies or their designees to prepare a Biological Assessment (BA) for major construction activities. The BA analyzes the effects of the action[2] on listed and proposed species. The process begins with a Federal agency requesting from FWS a list of proposed and listed threatened and endangered species. The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the list, the accuracy of the species list should be informally verified with our Service. No irreversible commitments of resources is to be made during the BA process which would foreclose reasonable and prudent alternatives to protect endangered species. Planning, design, and administrative actions may proceed; however, no construction may begin.

We recommend the following for inclusion in the BA: an on-site inspection of the area affected by the proposal which may include a detailed survey of the area to determine if the species or suitable habitat are present; a review of literature and scientific date to determine species' distribution, habitat needs, and other biological requirement; interviews with experts, including those within FWS, State conservation departments, universities and others who may have data not yet published in scientific literature; an analysis of the effects of the proposal on the species in terms of individuals and populations, including consideration of indirect effects of the proposal on the species and its habitat; an analysis of alternative actions considered. The BA should document the results, including a discussion of study methods used, and problems encountered, and other relevant information. The BA should conclude whether or not a listed or proposed species will be affected. Upon completion, the BA should be forwarded to our office.

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[1] A construction project (or other undertaking having similar physical impacts) which is a major federal action significantly affecting the quality of the human environment as referred to in NEPA (42 U.S.C. 4332(2)C).

[2] "Effects of the action" refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action.

Appendix P Recommendation Matrix And Criteria For Comparing Alternatives

The following documents in Appendix P summarize the highlights of the 1998 Value Analysis Study. These documents include the evaluation criteria that were used for retaining or eliminating alternatives and a matrix showing the results of the evaluation for each alternative along with the PDT's conclusions.

Criteria for Comparing Alternatives

Purpose: To describe evaluation criteria in the Willits Bypass Study Team Recommendations Matrix for elimination of alternatives. Please see attached Willits Bypass Study Team Recommendations Matrix.

COST

The project is currently programmed at a cost of $70 million in the 98/99 fiscal year. We requested this project be funded for $104 million, but funding was cut by the California Transportation Commission (CTC) when it added this project to the 1992 State Transportation Improvement Program (STIP). In November 1992, Proposition 156, the rail bond bill, did not pass. We are not sure what will happen to the Willits Bypass and many other projects in the STIP. We were told, prior to the elections, that if this bill did not pass we would lose funding for the project, since monies would have to be diverted south. However, the CTC is now looking for ways to avoid dropping projects. These decisions will be made in conjunction with the 1994 STIP.

Gaining additional funding for this project may be difficult; and, funding exorbitantly expensive alternatives, or a third interchange would be difficult to justify.

Cost estimates are preliminary and do not include traffic control, drainage, hazardous waste cleanup, and mitigation for other than wetlands. Alternative E1 does not include cost of a new interchange design at Oil Well Hill, since the alternative currently includes a very high retaining wall which is determined infeasible.

The ranking for cost shown on the Study Team Recommendations matrix is based on the following:

Preliminary Cost	Rank
< 30 million $	Excellent
31 to 70 million $	Good
71 to 100 million $	Fair
> 100 million $	Poor

HAZARDOUS WASTE

Using the following criteria, we rated the potential for encountering hazardous waste:

- Size of site in question
- Mobility and toxicity of hazardous waste suspected at the site
- Collected historical data from permits and records
- Field observations of each site
- Number of sites on each alternative

The numbers indicated on the matrix are an overall rating based on the above criteria and are summarized below.

Overall Rating	Rank
0	Excellent
1 to 4	Good
5 to 10	Fair
> 11	Poor

Wetland Impacts
Wetland impacts are a critical selection criteria, since current law requires that filling wetlands cannot be done unless no practicable alternative exists.

Wetland Impacts	Rank
0 to 10 acres	Excellent
11 to 20 acres	Good
21 to 60 acres	Fair
> 60 acres	Poor

Upland Impacts
This evaluation is qualitative, since final acreage calculations for upland habitat impacts have not yet been performed.

Endangered Species
This is a qualitative estimate of the anticipated impacts to endangered species for each alternative, and assumes that Northern Spotted Owl impacts will not jeopardize continued existence of the species.

SOCIO/ECONOMIC IMPACTS
The socio-economic impact of each alternative has been estimated using the following criteria:

Residential Relocations
The number of displaced residences has been estimated for each alternative, and represents the total number of single family residences, multiple dwelling units, and mobile homes/units.

The matrix shows the number of residential relocations estimated; and, the following ranking was used to compare alternatives:

Residential Relocations	Rank
0 to 5	Excellent
6 to 20	Good
21 to 40	Fair
> 40	Poor

Business Relocations
The number of displaced businesses has been estimated for each alternative. The TSM alternative requires purchase of a mini-storage business, and each unit is counted as a separate business. For this reason, the number of business relocations was reduced to 12 displacements for the TSM alternative, and the mini-storage business was counted as only one business displacement.

The matrix shows the number of business relocations estimated for each alternative; and, the following ranking was used to compare alternatives:

Business Relocations	Rank
0 to 3	Excellent
4 to 10	Good
11 to 20	Fair
>20	Poor

WILLITS BYPASS STUDY TEAM RECOMMENDATIONS MATRIX

Alternative	Interchange Locations	Preliminary Cost* (Million $)	Hazardous Waste (Overall Rating)	Interregional Service: Reduced Delay	Interregional Service: Reduced Accidents	Local Service
A	Upper Haehl Oil Well Hill	Good (60)	Excellent (5)	Excellent	Excellent	Good
C1	Upper Haehl Truck Scales	Good (75)	Good (2)	Excellent	Excellent	Good
C2	Upper Haehl Commercial Truck Scales	Good (84)	Good (4)	Excellent	Excellent	Excellent
C3	East Hill Truck Scales	Good (83)	Fair (7)	Excellent	Excellent	Good
J1	Upper Haehl Quail Meadows	Fair (96)	Fair (8)	Excellent	Excellent	Good
J2	Upper Haehl Route 20 Ext. Quail Meadows	Fair (108)	Poor (11)	Excellent	Excellent	Excellent
E1	Hollands Lane Route 20 Oil Well Hill	Poor (133)	Fair (5)	Excellent	Excellent	Good
E2	Hollands Lane Route 20 Wild Oat Cyn	Poor (134)	Good (3)	Excellent	Excellent	Good
E3	Hollands Lane Route 20 Lupi Creek	Poor (137)	Good (5)	Excellent	Excellent	Good
K	Upper Davis Oil Well Hill	Poor (143)	Good (5)	Good	Excellent	Good
O	None	Excellent (55)	Poor (19)	Good	Poor	Good
TSM	None	Excellent (20)	Poor (11)	Fair	Poor	Fair
No Build	None	Excellent (0)	Excellent (0)	Poor	Poor	Poor

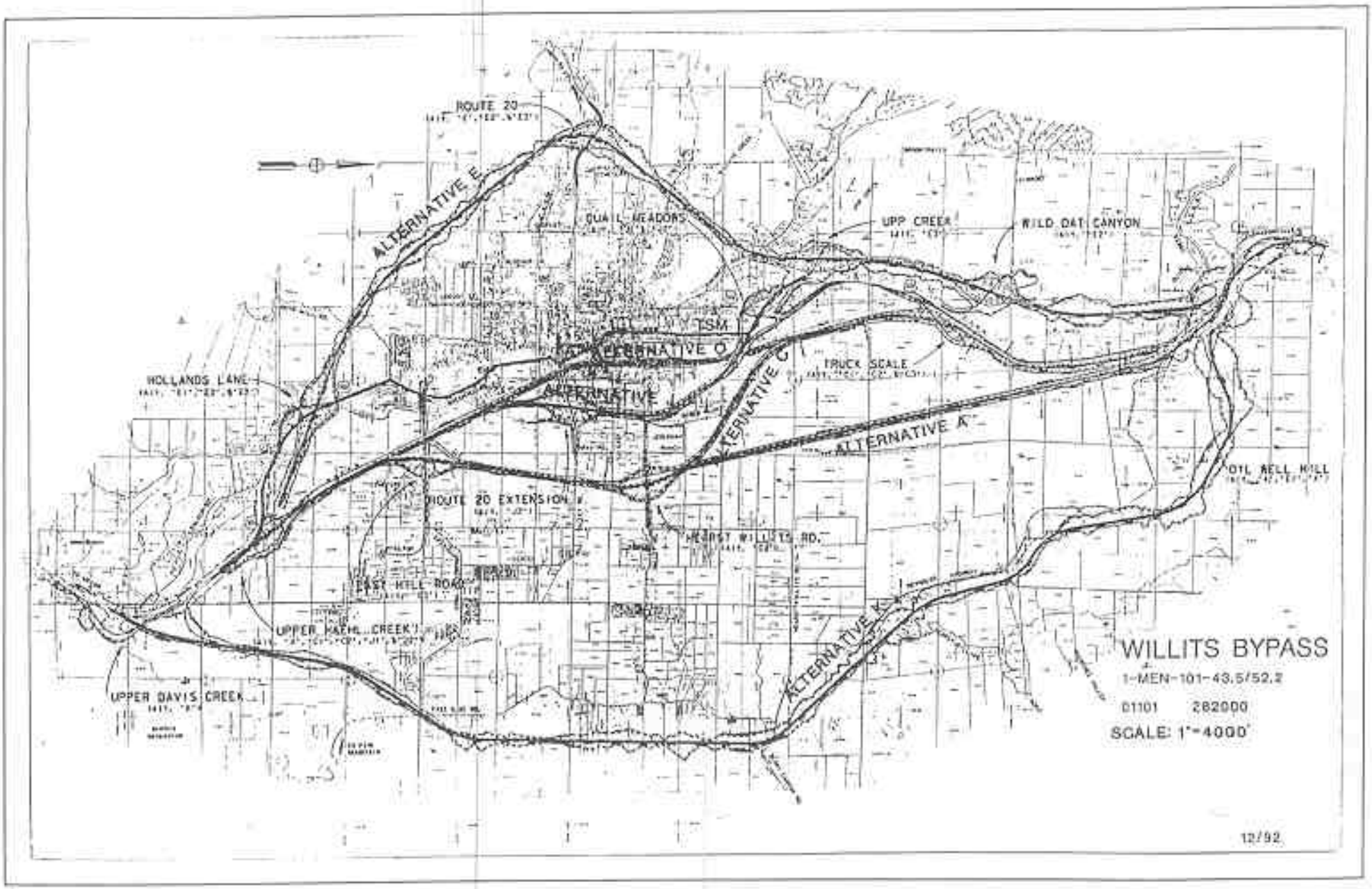
* Preliminary estimates only, and do not include the cost of [illegible]

= Alternative E1 does not include the cost of a new interchange design at Oil Well Hill, since the alternative currently includes a very high retaining wall which is determined infeasible.

† Historical Evaluation not yet complete, but 4(f) impacts are anticipated.

Alt.	Resource Impacts: 4(f)† Impacts (Number)	Resource Impacts: Wetland Impacts (Acres)	Resource Impacts: Upland Impacts	Resource Impacts: Endangered Species	Socio/Economic Impacts: Residential Relocations (Number)	Socio/Economic Impacts: Business Relocations (Number)	Recommend. to PDT	Rationale
A	Excellent (0)	Poor (135)	Good	Poor	Excellent (2)	Excellent (1)	Retain	Lowest Relocation.
C1	Excellent (0)	Poor (123)	Good	Poor	Excellent (3)	Excellent (1)	Retain	Good interchange location from the standpoint of service and wetland impacts.
C2	Excellent (0)	Poor (136)	Good	Poor	Good (11)	Good (4)	Drop	Additional interchange is costly. Wetland impacts due to additional valley interchange, and anticipated future growth inducement.
C3	Excellent (0)	Poor (122)	Good	Poor	Good (13)	Good (5)	Drop	C1 provides better service in terms of interchange location.
J1	Excellent (0)	Fair (60)	Fair	Fair	Fair (56)	Fair (17)	Retain	Less wetland impact than the C alternatives.
J2	Excellent (0)	Poor (81)	Fair	Poor	Poor (82)	Poor (29)	Drop	Additional interchange is costly. Wetland impacts due to additional valley interchange, and anticipated future growth inducement.
E1	Excellent (0)	Good (16)	Poor	Fair	Poor (85)	Good (7)	Drop	More relocation than E3. E3 also provides better service in terms of northern interchange location.
E2	Excellent (0)	Good (13)	Poor	Fair	Poor (84)	Good (15)	Drop	More relocation than E3. E3 also provides better service in terms of northern interchange location.
E3	Excellent (0)	Good (13)	Poor	Fair	Poor (76)	Fair (12)	Retain	Provides better service in terms of northern interchange location and less relocation than E1 or E2. Wetland avoidance alternative.
K	Poor (2)	Excellent (0)	Poor	Excellent	Fair (36)	Good (5)	Drop	Poor service in terms of interchange locations.
O	Poor (3)	Fair (30)	Fair	Fair	Poor (77)	Good (8)	Drop	Highest number of multi-dwelling units displaced.
TSM	Poor (7)	Excellent (1)	Excellent	Excellent	Fair (46)	Fair (14)	Retain	Lowest cost and low biological impacts. Non-freeway alternative.
No Build	Excellent (0)	Excellent (0)	Excellent	Excellent	Excellent (0)	Excellent (0)	Retain	Required for environmental document.

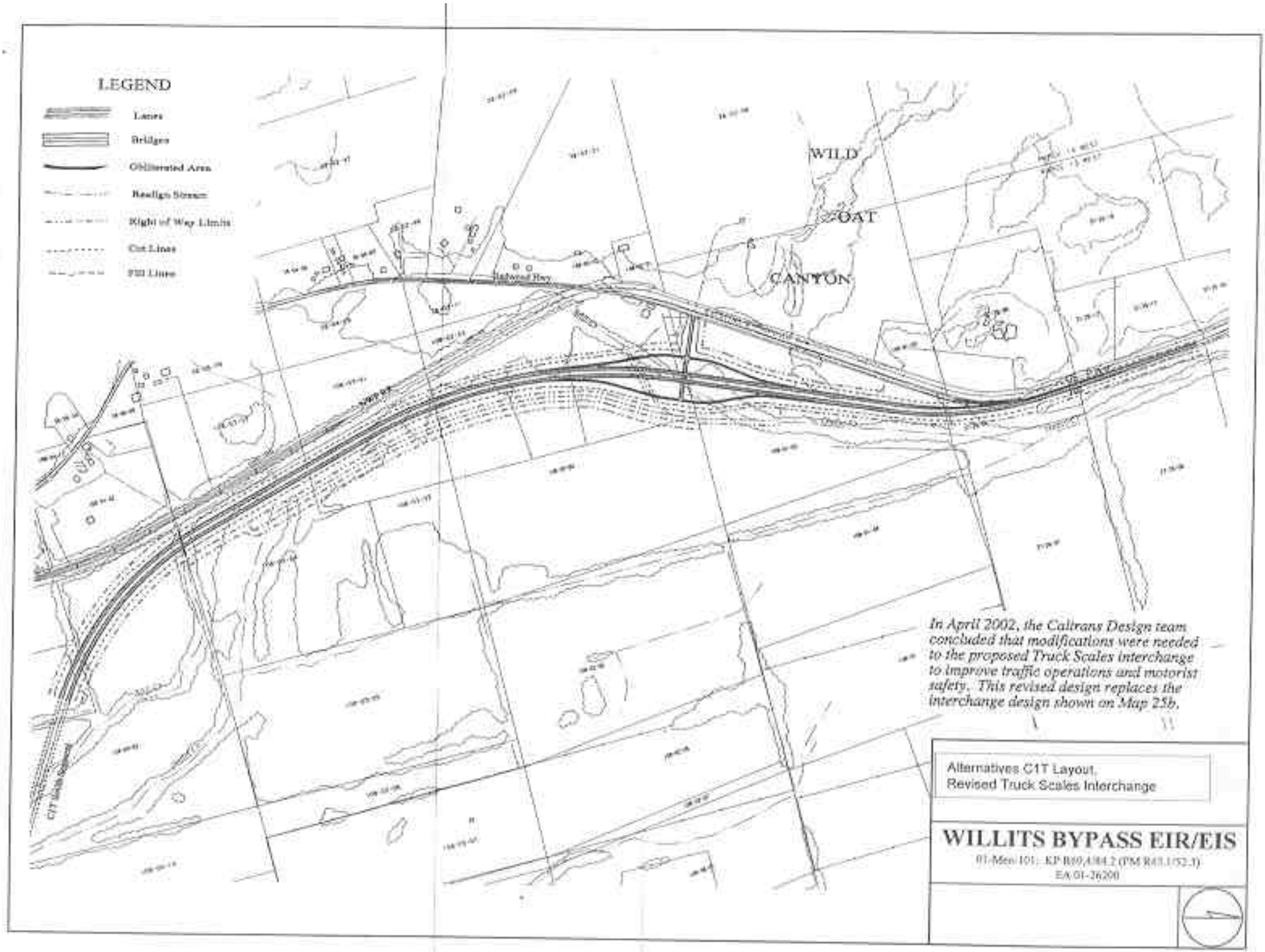
EXCELLENT = ● GOOD = ● FAIR = ● POOR = •


ROUTE 20
ALTERNATIVE E
QUAIL MEADOWS
UPP CREEK
WILD OAT CANYON
TSM
ALTERNATIVE D
ALTERNATIVE C
TRUCK SCALE
HOLLANDS LANE
ALTERNATIVE B
ALTERNATIVE A
OTL HELL HILL
ROUTE 20 EXTENSION
HARRIS WILLITS RD.
EAST HILL ROAD
UPPER HAEHL CREEK
ALTERNATIVE F
UPPER DAVIS CREEK
WILLITS BYPASS
1-MEN-101-43.5/52.2
01101 262000
SCALE: 1"=4000'
12/92

Appendix Q Revised Truck Scales Interchange (Alternative C1T)

In April of 2002, the Willits project design team developed revisions to the originally proposed Truck Scales Interchange for Alternative C1T. The original Truck Scales Interchange is shown on Map 25b in Volume 2. These revisions were made in response to critiques of the original proposal, as a result of Caltrans design exception approval process. The following interchange design changes are proposed: shift the mainline alignment easterly at the farthest point approximately 85 m (280 ft), change the interchange type to a diamond, and lengthen the connection to existing U.S. 101 at the north end by approximately 430 m (1400 ft) to complete the lane reduction. The new interchange is shown in this appendix and on Map 25b(2) in Volume 2. Caltrans Headquarters and FHWA have approved the modified interchange concept proposed by the Caltrans Design team. The revised interchange improves operation and motorist safety.

Caltrans has studied the differences in environmental impact between the two interchanges and concluded that there would be a minimal change in area impacted by the revised interchange design (see table below). The revised interchange design would result in approximately 0.43 ha (1.06 ac) increase in impact to jurisdictional wetlands and other waters of the U.S. Alternative C1T, with the former interchange design, impacted a total of 52.3 ha (129.1 ac). With the revised interchange the total would be 52.73 ha (130.16 ac). Caltrans has notified its NEPA/404 resource agency partners and California Department of Fish and Game of the revised interchange design and the differences in environmental impacts between the old and revised interchange designs (copy of letter follows).


LEGEND
Lanes
Bridges
Obliterated Area
Realign Stream
Right of Way Limits
Cut Lines
Fill Lines
WILD
OAT
CANYON
Hallwood Hwy
In April 2002, the Caltrans Design team concluded that modifications were needed to the proposed Truck Scales interchange to improve traffic operations and motorist safety. This revised design replaces the interchange design shown on Map 25b.
Alternatives C1T Layout,
Revised Truck Scales Interchange
WILLITS BYPASS EIR/EIS
01-Men-101; KP R69.4/84.2 (PM R43.1/52.3)
EA 01-26200

COMPARISON OF IMPACTED WETLAND AND PLANT COMMUNITIES
For original and modified Truck Scales Interchange

Habitats	ACOE Jurisdictional	Impacted Veg. Areas Orginal IC Ha	Modified IC Ha	Area Increase Ha
GRASS LAND				
ANNUAL GRASS LAND	N	1.3779	4.4109	3.033
PASTURE GRASSLAND	N	0.01667	0.2052	0.18853
NATIVE BUNCHGRASS	N	0	0	0
OLD FIELD GRASSLAND	N	0	0	0
DRYLAND FARMED GRSLND	N	0	0	0
OAK WOODLAND		0	0	0
GARRY OAK WOODLAND	N	0	0	0
BLACK OAK WOODLAND	N	0	0	0
WOODED RIPARIAN				
MXD RIPARIAN WOODLAND	Y	1.9174	2.0152	0.0978
ASH RIPARIAN WOODLAND	Y	0.0794	0.2722	0.1928
VALLEY OAK RIP. WDLND	Y	0	0	0
V.OAK-ASH RIP WDLND	Y	2.4749	1.5736	-0.9013
MIXED WILLOW SCRUB	Y	1.2582	1.2472	-0.011
MXD RIPARIAN SCRUB	Y	0.3942	0.1878	-0.2064
MONTANE RIP WDLND	Y	0	0	0
FOREST				
MXD. N. SLOPE FOREST	N	0	0	0
DOUGLES FIR FOREST	N	0	0	0
MXD. CONIFER FOREST	N	0	0	0
MXD EVERGREEN FOREST	N	0	0	0
CHAPARRAL				
MXD CHAPARRAL	N	0	0	0
MANZANITA CHPRL	N	0	0	0
MARSH				
MXD MARSH	Y	1.4393	1.5662	0.1269
CATTAIL MARSH	Y	0	0	0
TULE MARSH	Y	0	0.0758	0.0758
MEADOWS				
WET MEADOW *	Y	12.9	12.7135	-0.1865
HAY MEADOW	Y	0	0	0
RESIDENTIAL MDW	N	0	0	0
DRY MEADOW	N	0.155	0.161	0.006
OTHER COMMUNITIES				
VERNAL POOL	Y	0	0	0
SWALE	Y	0.0108	0.005	-0.0058
STOCK POND	Y	0	0	0
OPEN WATER	Y	0	0	0
OTHER WATER	Y	0	0	0
ORCHARD (ABANDONED)	N	0	0	0
DEVELOPED	N	0	0	0
		22.02377	24.4336	0.4893
				1.24
				1.7393
				(4.3 acres)

* Wet Meadow unsurveyed area

N = Non-ACOE jurisdictional wetland
Y = ACOE jurisdictional wetland
IC = Interchange
Ha = Hectares (all amounts in hectares unless otherwise noted)

Source: Caltrans 4/2002

The following letter to U.S. National Marine Fisheries Service was also addressed to U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and California Department of Fish and Game to inform them of the revision to the Truck Scales Interchange within Alternative C1T.

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 3, SACRAMENTO AREA OFFICE
2800 Gateway Oaks Drive, Suite 100
SACRAMENTO, CA 95833
TDD TEL (530) 741-4509
FAX (916) 274-0110
TEL (916) 274-0609

May 1, 2002

U.S. National Marine Fisheries Service
Attn: Tom Daugherty
2550 North State Street
Ukiah, CA 95482

Subject: Willits Bypass Project, Mendocino County
Proposed Design Modification to Alternative C1T Truck Scales Interchange

Dear Mr. Daugherty:

This letter is being submitted to each of our NEPA/404 resource agency partners and California Department of Fish and Game. The purpose of this letter is to describe design modifications Caltrans is making to the Alternative C1T Truck Scales Interchange, explain our reasons for revising the interchange design, and compare the environmental impacts of the old and new interchange designs. Three attachments are provided for your review: a layout showing the preliminary original interchange design (Map 25b), a layout showing the revised design, and a table comparing wetland and plant communities for the old and new designs.

The following interchange design changes are proposed: shift the mainline alignment easterly at the farthest point approximately 85 m (280 ft), change the interchange type to a diamond, and lengthen the connection to existing U.S. 101 at the north end by approximately 430 m (1400 ft) to complete the lane reduction.

In April of 2002, the project's design team developed these modifications in response to critiques of the original proposal, as a result of Caltrans design exception approval process. Caltrans Project Development Procedures Manual requires Design Engineers to obtain identified design exceptions at each significant milestone of the project development process, one of which is the draft environmental document stage. Upon reviewing the interchange design as proposed in Map 25b, Caltrans Headquarters Design Reviewer and Headquarters Project Development Coordinator indicated that they would not issue a design exception for the interchange. Headquarters has approved the modified interchange concept proposed by the Caltrans Design team. The revised interchange improves operation and motorist safety.

Caltrans has studied the differences in environmental impact between the two interchanges and concluded that there would be a minimal change in area impacted by the revised interchange

design (see attached table). The revised interchange design would result in approximately 0.43 ha (1.06 ac) increase in impact to jurisdictional wetlands and other waters of the U.S. Alternative C1T, with the former interchange design, impacted a total of 52.3 ha (129.1 ac). With the revised interchange the total would be 52.73 ha (130.16 ac).

Caltrans has reviewed the revised interchange design with the Federal Highway Administration (FHWA) and discussed with FHWA the best approach for disclosing this new information to the public. Because public circulation is eminent, we will not change the entire environmental document to reflect the revised interchange. Instead, FHWA has approved our proposal to include as an appendix to the Draft EIS/EIR a description of the interchange with mapping and a table comparing the environmental impacts of the two designs. We also will provide a brief explanation of the revised interchange design in the main body of the document. In addition, Caltrans will ensure there is full disclosure of the new interchange design with complete coverage at our project website and at the public workshop during the public circulation period.

Caltrans is modifying the Draft EIS/EIR to reflect the change in interchange design. If you require additional information related to this correspondence, please contact me at 916-274-5800.

Sincerely yours,

Cher Daniels

Cher Daniels, Chief
Office of Environmental Management – Sacramento (S-1)

Enclosures

cc: Rick Knapp, Caltrans
John Webb, Caltrans
Lena Ashley, Caltrans
Harry Khani, FHWA